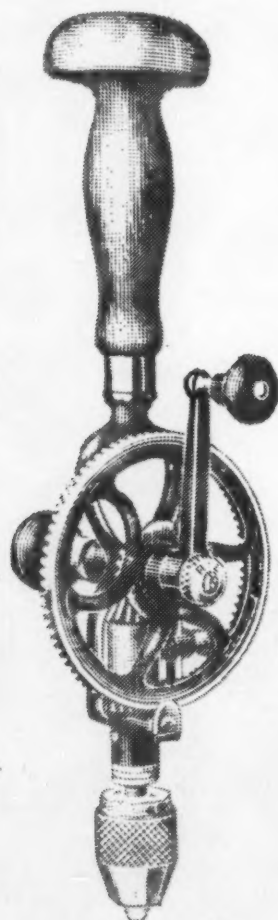


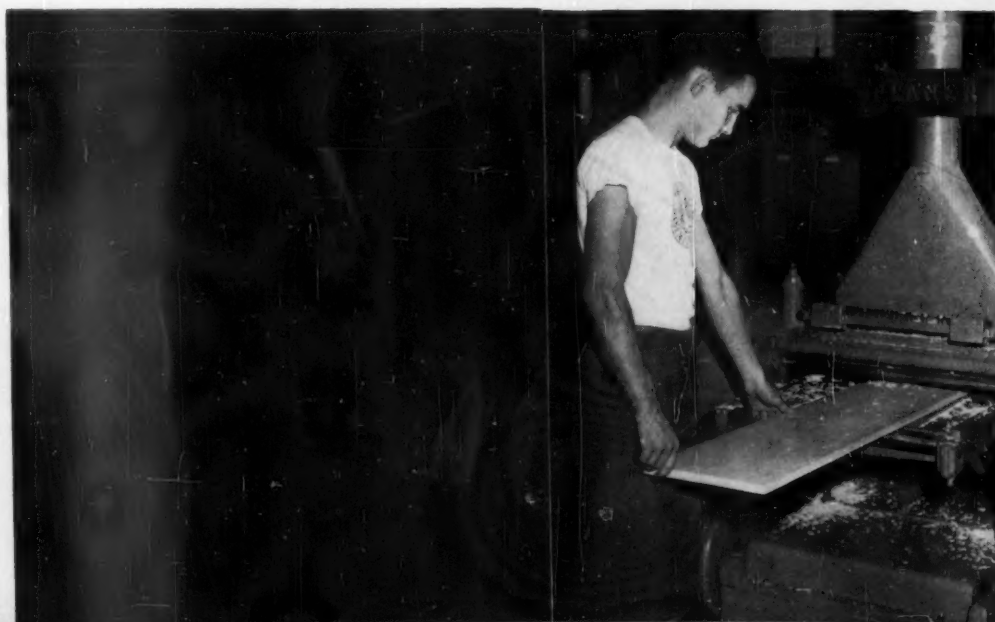
December, 1958

# **the AMERICAN SCHOOL BOARD JOURNAL**

A Periodical of School Administration



the new look in industrial arts  
and educational vocation  
(see page 27)





Bay Bridge, San Francisco



The Board Walk, Atlantic City

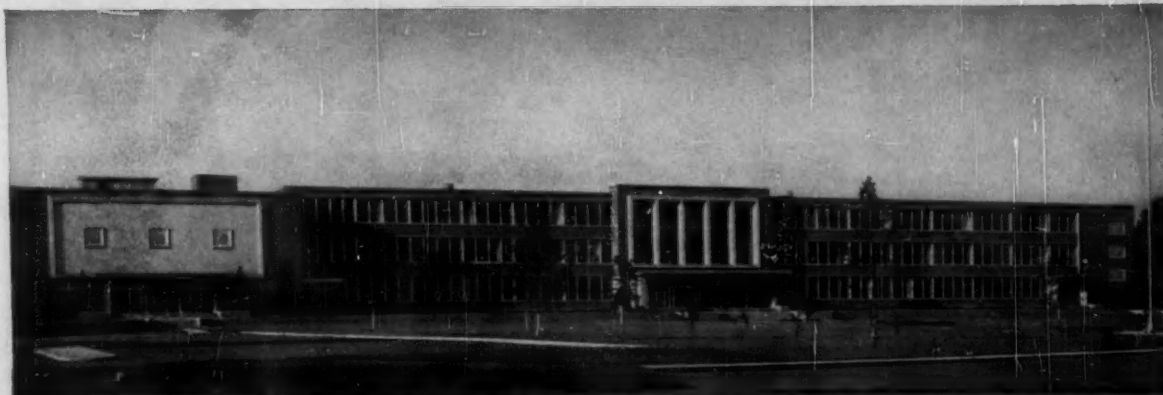
# VIRCO



**See • Learn • Compare**  
at the AASA Exhibit  
Atlantic City, Feb. 14-18

On January 25th in San Francisco, California, The National School Board Association, and on February 14th in Atlantic City, New Jersey, The National Educational Association, The American Association of School Administrators will hold their Annual Conventions. Virco Manufacturing Corporation wishes to take this opportunity to salute the many thousands of dedicated School Administrators and Educators who will attend these most informative sessions. Virco would also like to invite you to attend their exhibit and preview, the most advanced school furniture design and construction features now available. We would like your reactions to our new school furniture line—because we value your opinions and suggestions. You will also receive a copy of our new 1959 School Furniture Catalog, in full color and with complete specifications showing our entire school furniture line. NSBA, Virco Booth #105-106. NEA/AASA, Virco Booth #1124-26-28. It will be our pleasure to meet you in person, and assist in your classroom seating problems. Virco Mfg. Corp., Los Angeles, California; Conway, Arkansas.

# You'll Have a More Efficient School with Johnson Pneumatic Controls



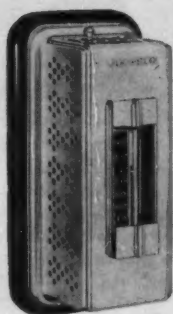
*Lima Senior High School, Lima, Ohio. McLaughlin & Kell, architects; Strong & Strong, mechanical engineers; H. U. Tuttle, general contractor; E. W. Fife, mechanical contractor, all of Lima.*

At the new Lima Senior High School, Johnson Pneumatic Temperature Controls assure the necessary flexibility to meet a wide variety of heating and ventilating requirements.

Some 60 classrooms and special purpose rooms are individually controlled by Johnson Room Thermostats that consistently maintain refreshing, even temperatures and assure adequate ventilation. Teachers and students alike get the benefits of an ideal thermal environment for teaching and learning in this impressive school.

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The specialist Johnson organization can help make your new school more efficient and reduce your operating costs, just as it has in tens of thousands of the nation's schools. Ask your consulting engineer, architect or local Johnson engineer about the unmatched comfort and economy features of Johnson Pneumatic Controls. Johnson Service Company, Milwaukee 1, Wisconsin. 105 Direct Branch Offices.

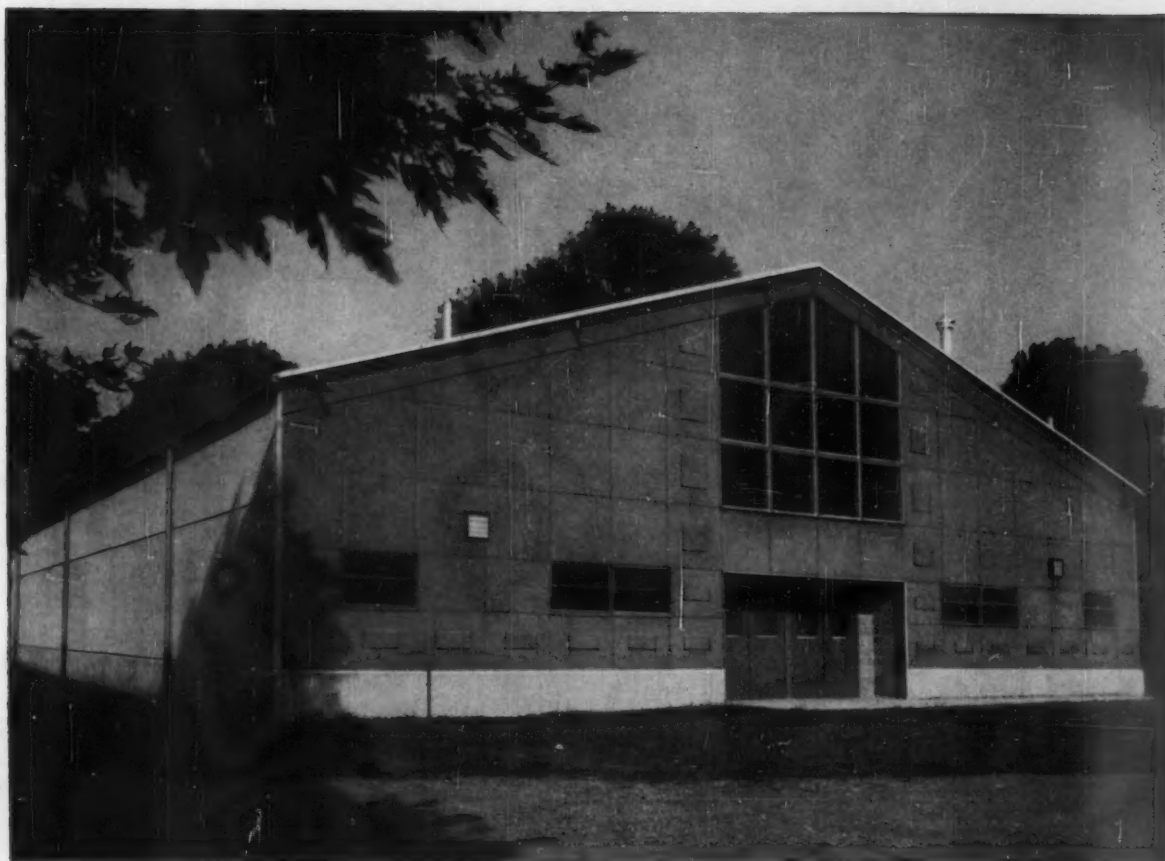


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PNEUMATIC SYSTEMS

DESIGN • MANUFACTURE • INSTALLATION • SINCE 1885





## Must a gym cost so much just because it's a gym?

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Parents and students alike are quick to admire the comfort, safety and utility that Butler school buildings offer. Bond issues are more easily presented, more quickly approved when you can show how Butler helps appropriations go farther.



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# **the AMERICAN SCHOOL BOARD JOURNAL**

December, 1958

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## **OUR COVER . . .**

A three-part survey of industrial arts and vocational education, an increasingly important area of curriculum in our increasingly technical age, (1) explains what the I-A department should accomplish (pg. 27); discusses how to select shop equipment (pg. 29); and (3) reviews an outstanding new vocational education school (pg. 31).

### **For your index . . .**

An Index to Volume 137, July to December, 1958, has been prepared. For your free copy, address a post card to Bruce — Milwaukee, P.O. 2068, Milwaukee 1, Wis., asking for index 137.

**A review of your JOURNAL for December (pg. 4) —→**

### **WILLIAM C. BRUCE, Editor**

Published on the 25th of the month preceding the date of issue by THE BRUCE PUBLISHING COMPANY, 400 North Broadway, Milwaukee 1, Wisconsin.  
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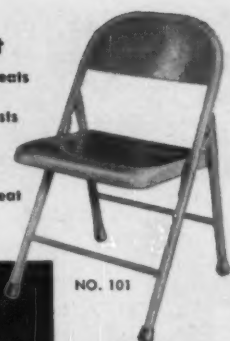
THE AMERICAN SCHOOL BOARD JOURNAL, A Periodical of School Administration, December, 1958, Vol. 137, No. 6. Copyright, 1958, by The Bruce Publishing Company. — All rights reserved. Title registered as Trade Mark in the United States Patent Office. Entered as Second-Class Mail Matter, March 17, 1891, at the Post Office at Milwaukee, Wis., under the Act of March 3, 1879.

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NO. 82

WRITE FOR NEW  
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## Demountable

### CHAIR TRUCKS

Seven standard sizes hold both X-type channel or Y-type tubular chairs — upright or horizontal. Regular or under-stage models. Demountable ends and exclusive change-angle frames permit stacking empty trucks one on the other.

**KRUEGER**  
METAL PRODUCTS • GREEN BAY • WISCONSIN

## Your JOURNAL for December

The dates will be January 25 through 28. The place will be the Civic Auditorium Center in San Francisco, Calif. The event will be the 1959 convention of the National School Boards Association.

In your JOURNAL for December, we've interviewed Carl B. Munck, the current NSBA president, who describes what has been planned for those of you who will attend this national meeting (page 40). President Munck talks about a solid and appealing program formed about the theme, "Improving Education — A Free People's Responsibility."

Our preview of the upcoming NSBA convention also presents an outline of the events for your reference — who are the keynoters, what the discussion groups will consider, etc.

See you in San Francisco!

Your JOURNAL for December features two articles that we believe you will find worth reading, devoted to the general area of curriculum planning: (1) how Waukegan, Ill., individualizes instruction of the gifted by combining the various plans to fit each individual school in the district (page 17); and (2) an analysis of high school scheduling (page 19) with a flood of hints about how to improve pupil load, how to make better use of the school day, etc.

And Dr. Boles' basic, eight-part series "Sources of School Building Economy" is concluded (page 37). Reprints of this

We at the SCHOOL BOARD JOURNAL would like to wish all of our readers and friends a most blessed and merry Christmas.

helpful series will be available shortly, at minimum costs for your reference when you are analyzing specifications and costs of your new schools.

This is, again, only a selection of articles. Your best bet would be to page through the issue and read what interests you most — only please don't forget the regular departments!

## for January...

The traditional annual school building design and building number of your JOURNAL reviews some fine, appropriate schools and considers trends in design, planning, heating, lighting, acoustics, etc. We feel you'll want to keep this issue as a guide in your 1959 school planning.

*The Editor*

**SUBSCRIPTIONS.** In the United States, Possessions, and Canada, \$4.00 a year, payable in advance. Two-year subscriptions will be accepted at \$6.00. In all foreign countries, \$5.00, two years at \$8.00. Single copies, 50 cents.

**DISCONTINUANCE.** Notice of discontinuance of subscription must reach the Publication Office in Milwaukee at least 15 days before expiration date.

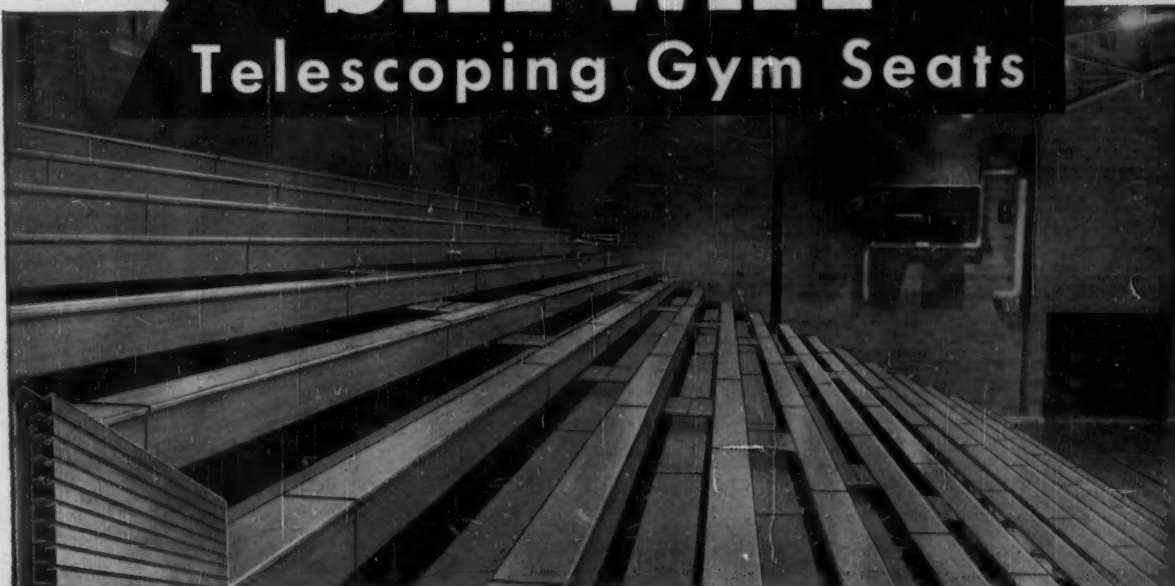
**CHANGE OF ADDRESS.** When you have a change of address kindly report it to us at once. Send us your old as well as your new address and be sure the Postmaster is notified. Postal regulations restrict forwarded service on magazines to two issues only.

**EDITORIAL MATERIAL.** Manuscripts and photographs bearing on school administration, superintendence, school architecture, and related topics are solicited and will be paid for upon publication. Contributions should be mailed to Milwaukee direct and should be accompanied by return postage if unsuitable. The contents of this issue are listed in the "Education Index."

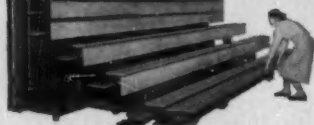
SCHOOL BOARD JOURNAL for DECEMBER, 1958

# SAFWAY

## Telescoping Gym Seats



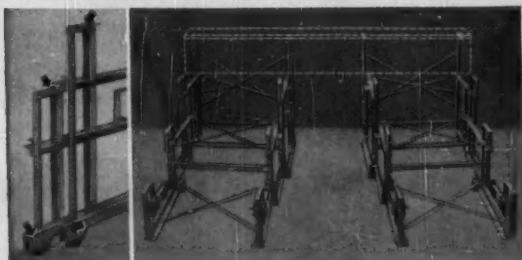
*This 18-row installation telescopes easily and accurately*



...assure quick, easy changes  
for every gym seating event

**YOUR GYM SEAT SET-UP** may be changed several times daily for varied gymnasium events. With frequent opening and closing, *easy operation* of seats is vital to keep your handling time and costs low.

Safway seats roll smoothly—minimize friction—re-



**FRICTION MINIMIZED BY ROLLERS;  
RIGIDITY INSURES STRAIGHT TRACKING**

(LEFT) Rollers eliminate metal-to-metal friction at contact points. Top arrows show horizontal rollers in channel under foot boards; bottom arrows show vertical rollers between wheel assemblies.

(RIGHT) Standard 16-ft. section, showing vertical and horizontal bracing. Rigid structure keeps rows always parallel to insure straight, in-line tracking as rows telescope in or out.

duce effort. Complete 16-ft. sections move straight in and out, without binding or cocking. The simple telescoping design eliminates jointed levers and crossarms.

Advanced Safway engineering also gives you these important advantages:

**STRONG, SAFE CONSTRUCTION**—8 steel columns under every row; uniform load distribution through vertical and horizontal steel bracing; 3 automatic locking devices.

**SIMPLE, EFFICIENT DESIGN**—Minimum of moving parts. Stable support with extra-long wheel carriages and 8 self-lubricating wheels under each row.

**NO POWER EQUIPMENT NEEDED**—With binding eliminated and friction minimized, there is no need for costly power equipment.

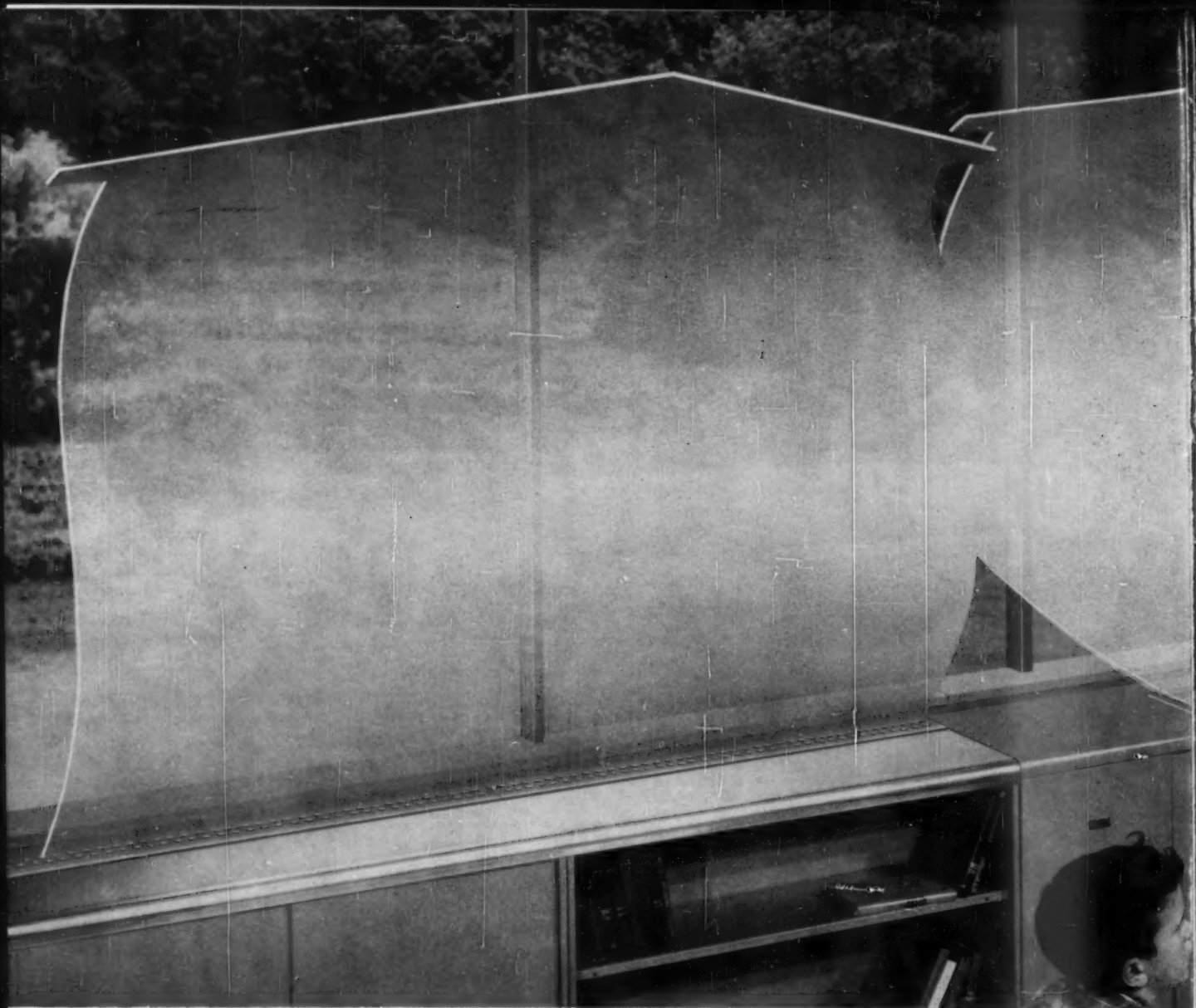
**HANDSOME, FURNITURE-LIKE APPEARANCE**—Seat and foot boards have a rich, glossy Golden Oak finish.

**Let us help you plan!**

Submit your seating requirements for recommendations by experienced Safway engineers. There is no charge for this service. And write today for your free copy of the new Catalog 1612.







# This moving wall stops classroom drafts

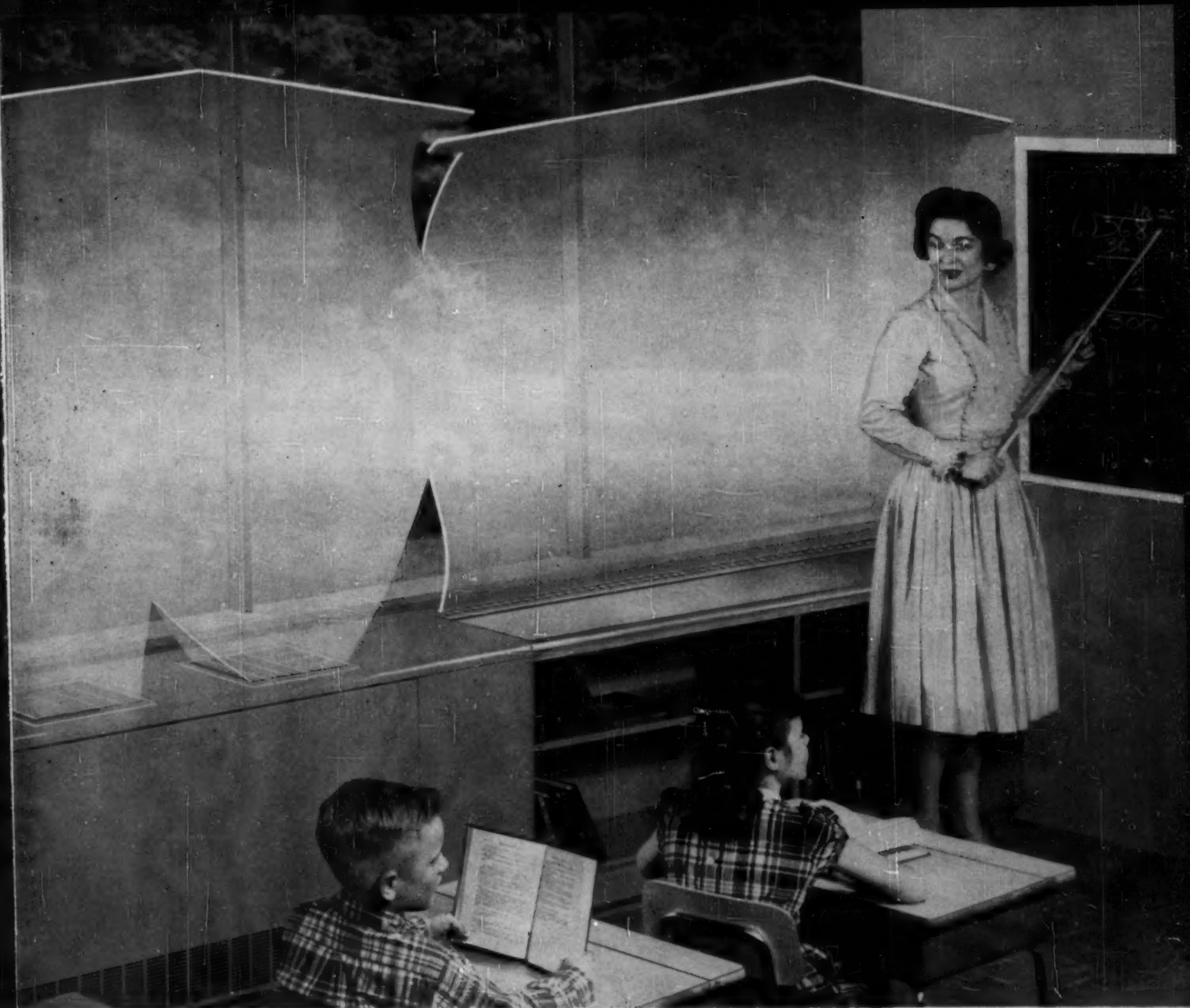
*Trane Unit Ventilator with Kinetic Draft Barrier ends window chill, wakes up every corner*

Modern schools with expansive walls of glass need modern methods of classroom ventilation to eliminate cold window downdrafts, to keep dead air from piling up in corners. The TRANE Unit Ventilator System with *Kinetic Draft Barrier* is solving these twin problems by stopping drafts with a moving wall of rising air—and by providing continuous air circulation that gently moves tempered air into every corner of the room, every moment of the day.

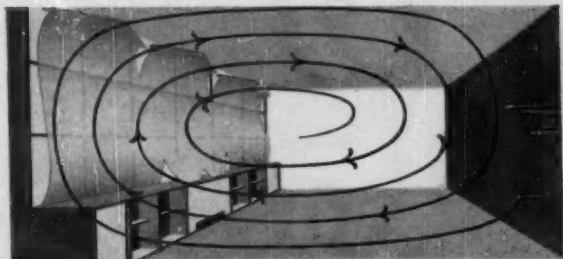
With this exclusive TRANE method of classroom ventilation, tempered air is gently forced from room-

wide outlets of the TRANE Unit Ventilator. Only the TRANE *Kinetic Draft Barrier* gives you this continuous . . . room-wide . . . powered ventilation! Ordinary systems, with on-again-off-again action, can allow dead, stale air to accumulate in the corners. And, when their action is "off" there are chills and downdrafts from the windows.

So for an ideal climate for learning, in every seat, all day long, turn to TRANE! Ask your architect, consulting engineer or contractor. Or write TRANE, La Crosse, Wisconsin.



of tempered air  
...ends stuffy corners



**TRANE Kinetic Draft Barrier** works like this: air is forced from the Unit Ventilator and from the room-wide outlets. This moving wall of air blocks out drafts, ends window chills. At the same time, it mixes with room air and gently, evenly circulates into every corner of the room.

For any air condition, turn to

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HEATING, VENTILATING AND HEAT TRANSFER EQUIPMENT



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# Surveying the School Scene

## NEW YORK MERIT PROPOSAL HIT

A proposal of New York superintendent of schools, John J. Theobald, for "some formula of merit increases" in teachers' salary schedules met with sharp opposition from the New York Teachers Guild and the Brooklyn Teachers Association. A representative of New York's "JCTO," the Joint Committee of Teachers Organization, warned that it "will definitely fight any plan to pay certain teachers a so-called merit salary." The New York High School Teachers Association expressed willingness to "listen to what Dr. Theobald has to say."

## POPULATION HITS 175 MILLION

The census bureau reported that the population of the United States reached 175 million during October. While it took 17 years for the population to climb from 125 to 150 million, it required only eight and one-half years to make the latest 25 million.

More recent trends, however, indicate a slowdown in the country's birth rate, traced by many to the recession.

## SCIENCE BOOK LIBRARIES

The National Science Foundation announced recently that 350 circulating libraries, each consisting of 200 science books, would be sent this school year to 1400 of the country's high schools. Fifty books will be sent at a time, with an exchange about every two months, so that each school will have the use of a complete set during the year. The

project is being conducted by the National Association for the Advancement of Science.

## NEA SALARY GOAL

An upgraded salary scale for teachers of \$6,000 to \$13,000 is the new goal of the NEA, replacing the \$5,000-\$10,000 of last year. Dr. Robert McLain, salary consultant for the NEA, declared that this level is needed to "produce better teachers."

The NEA also reported that it would cost the United States about \$13.6 billion a year to raise teachers' salaries from the national average of \$4,650 to \$7,550, while cutting down on pupil-teacher ratios, a sum that the nation "can well afford."

## LITTLE ROCK BOARD QUILTS

Under pressure from the federal courts and from Arkansas state officials, five members of the Little Rock school board resigned en masse, allowing district voters the right to select a new board on December 6. The city's besieged superintendent, Virgil T. Blossom, was dismissed.

● In Dade County, Fla., the school board has ordered a study of the feasibility of admitting Negroes to a pilot white elementary school to start desegregation on a voluntary basis.

## 1957 EDUCATION EXPENDITURE

The Census Bureau's report, "City Government Finances in 1957," reported that the total revenue of city governments amounted

## ETV LIMITATIONS

To clarify some of the important pronouncements concerning educational television, Supt. William Brish, of Washington County, Hagerstown, Md., has called attention to the fact that "educational television can motivate and stimulate pupils; provide information along with texts; develop ideas; raise questions; provide a common experience; challenge pupils to assume more responsibility."

"Television cannot handle classroom discussions; clear up misunderstandings; provide follow-ups on the lessons, or supervise work."

Educational television, concludes Dr. Brish, "can make resource people such as nationally known scientists, lecturers, government figures, available to large groups; it can use materials and apparatus that are in short supply or dangerous for general classroom use."

to \$11,867 million, or 8.4 per cent more than in 1956. The total revenue, including all revenue received from external sources by the city corporations and their dependent agencies, amounted to \$9,165 million, or 8.6 per cent more than the 1956 amount.

Education, it was indicated, took a larger share of city expenditure than any other function. City expenditures for education totaled \$1,415 million in 1957, or 14.4 per cent more than in 1956. Spending for city-operated schools during the same period, amounted to \$1,360 million, up 12.8 per cent from the previous year.

## PHYSICS STUDY FINANCED

A nationwide study of the best features of physics laboratories and buildings will be started immediately with a grant of \$75,850 from the recently organized Ford project, Educational Facilities Laboratories. The study, expected to stimulate better planning of science facilities for high schools and junior colleges, will be conducted under the joint auspices of the American Association of Physics Teachers and the American Institute of Physics.

## ETV RESEARCH FUNDS

The Office of Education announced recently that it is prepared to consider applications for federal funds to support research projects in educational television, radio, motion pictures, and related communications media. The National Defense Education Act authorizes \$3 million for the first year and \$5 million for each of three succeeding years to support research in these areas.

Applications for research grants or contracts may be made by letter or on the form now utilized by the Co-operative Research Program to Director, Communications Media Research Program, Office of Education, Department of Health, Education, and Welfare, Washington 25, D. C.

## Boldness and Imagination

Reaching out for the moon is no longer fantasy, it is reality! Our world spinning along at a new electronic and atomic pace calls for a new type of school board—one with the imagination and vision of tomorrow, and the boldness to build it!

The school boards are the headwaters of the streams running into the fountain of knowledge. Not only are school boards strengthening the basic 3 R's but they use them as the springboard for a new concept in education. The birth pangs of this new educational philosophy and curriculum already has begun. All boards must make haste to keep pace with this rapidly changing world.

So-called "frills" in our curricula do exist in many schools. They must go. Borderline subjects which have been entrenched for years can be safely cut to a minimum.

Discipline must be strengthened. Grouping according to ability is the accepted procedure in many schools and before long will be accepted throughout the nation. Improved aptitude testing and a broadened guidance department should be instituted where they are still lacking.

To unlock this new Pandora's Box of

hidden talents, new genius, unbelievable new miracles of attainment, we need the Key that can do it—the best teachers possible. We cannot have them until salary schedules rise another 50 to 90 per cent, along with better working conditions, more respect, and a greater acknowledgment of the important place in our society held by our teachers.

These changes must be wrought through or by our school boards. Where the administrators lack the vision or courage to make these drastic changes they must be prodded by their school boards. Where the administrators have shown the fortitude to take the necessary steps they should have the strong, unanimous backing of their boards.

Therefore, with us, the school board members of America, lies the power today to impart to our students the knowledge needed to achieve the glory of "a brave, new world of tomorrow" through peace and plenty in the atomic age ahead.

— Ben Miller

Board of Education  
Central School District No. 2  
Ellenville, N. Y.





**Indoor-outdoor classrooms,  
low-cost air conditioning  
keynote this school design**

This Washington State school design by Culler, Gale, Martell & Norrie, Spokane architects and engineers, combines a stimulating out-of-doors atmosphere with extremely low-cost air conditioning.

The design is based on completely air conditioned four-classroom "cluster" units—with each classroom opening to its

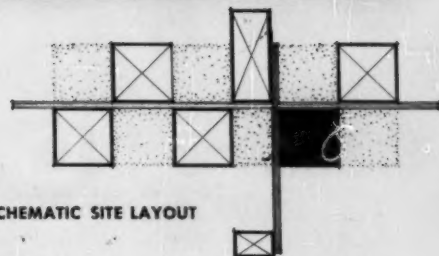
Classroom view, looking out on exterior court. Exclusive DRAFT/STOP eliminates winter downdrafts from glass divider wall without using heat. For this reason, it is the only draft-elimination method compatible with year-round air conditioning.

## air conditioned school design

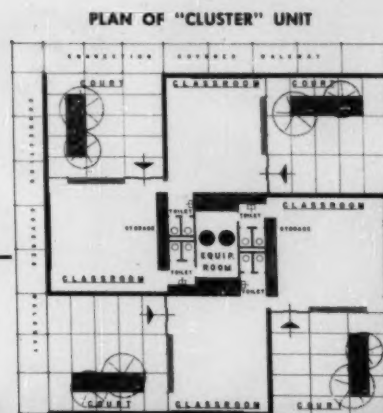
own private court. This provides immediately-accessible outdoor activity along with the ultimate in controlled indoor environment.

The "cluster" conception is also responsible for the extremely low installation and operating cost of the air conditioning. Four-way orientation makes sure that no two classrooms will require the peak air conditioning load at the same time. In addition, the deep overhang over the glass divider wall and the protection of the court's wing wall contributes to minimizing and dividing the solar load. As a result, a 5-ton packaged chiller is all that's required to air condition the "cluster".

Expanding on the original "cluster", other units and their group activity spaces are in a checkerboard arrangement connected by a covered walkway.



SCHEMATIC SITE LAYOUT



PLAN OF "CLUSTER" UNIT

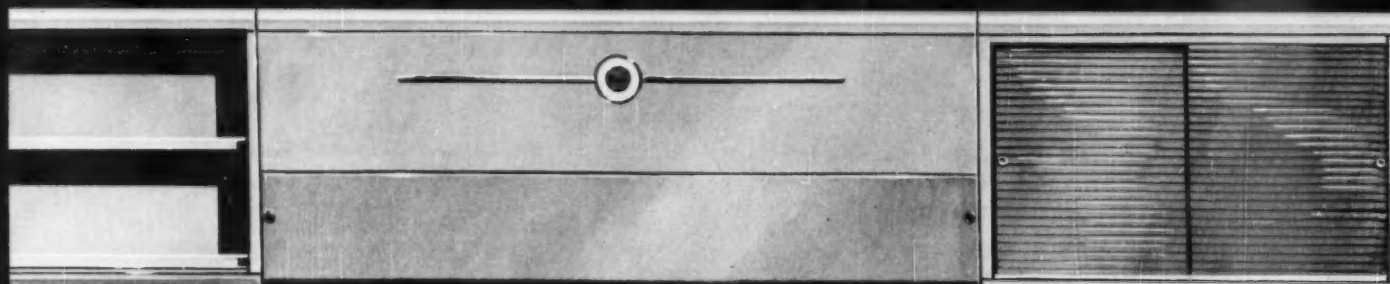
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*herman nelson*

# hermel-cool/II

## UNIT VENTILATOR

### with optional air conditioning



already selected by more than ~~100~~<sup>180-200</sup> schools

Will the school you are planning ever need air conditioning? The answer is definitely—yes. Architects and educators agree on the importance of the proper learning environment. And only air conditioning can assure that your school will have it when the weather outside is warm.

That's why today—less than a year after its introduction—the HerNel-Cool II unit ventilator with optional air conditioning has been selected for use in more than 200 schools, which are either air conditioned now or have planned for it.

HerNel-Cool II is the first unit ventilator to offer optional air conditioning, as well as heating, ventilating and natural cooling (with outside air). Units can be installed so the school enjoys the usual bene-

fits of Herman Nelson unit ventilation, including the famous DRAFTSTOP system—the only type of draft control that is compatible with air conditioning. Then at any time—immediately, or whenever the school budget will allow it—the mere addition of a chiller in the boiler room is all that is needed for complete hot weather air conditioning.

This can be accomplished without disruption of classroom activities... without expensive alteration and installation charges. The cost is far less than for separate heating and air conditioning systems—both for installation and operation.

Want information? Write today to Herman Nelson Unit Ventilator Products, American Air Filter Company, Inc., 215 Central Ave., Louisville 8, Ky.

AAF

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System of Classroom Cooling, Heating and Ventilating

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Monroe Steel Folding Chairs in attractive range of styles, sizes and prices. Excel in comfort, easy handling and durability. Also full line of non-folding chairs, desks and combinations for classroom, cafeteria and church school use.

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Monroe's new movable partitions change idle space into useful areas. Smooth Masonite panels, tubular steel frames. Swivel pedestals, casters or glides.

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"Stationary" racks in single or double face units snap-lock rigidly together to fit any space or provide capacity required.

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COAT and HAT RACKS

Style D.P. 4-40, Portable Checker Rack (illustrated) is 4 ft. 2 in. long; holds 40 coats and hats; goes wherever needed on large, ball-bearing-swivel casters. Comes with or without checks and snap-on numbers. Strongly welded of square tubular, heavy gauge and highly embossed furniture steel. Smart in modern baked finishes. Give lifetime service - never sag, creak or sway. 3 ft., 4 & 5 ft. units available, as well as other efficient space saving equipment for every church, school, commercial, industrial and institutional need.

Write for Bulletin CK-206

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## ASSOCIATION NEWS

### 1959 AASA MEETING TO STRESS CREATIVE ARTS

The arts, which have played second fiddle to science and mathematics in current discussions of education, will star at the 1959 annual meeting of the American Association of School Administrators, to be held February 14-18 in Atlantic City, N. J.

For the first time the AASA convention program will give major emphasis to the subject disciplines so often neglected in American schools - music, fine art, drama, literature, the dance, arts and crafts, and architecture.

From the opening presentation by the Walt Disney Productions, on creativity in the graphic arts, to the closing performance, a musical program by Van Cliburn, the ten general sessions will feature great individual artists and performing groups. Authorities on literature, drama, music, architecture, and fine art will address the convention.

The creative arts will also receive attention among the group work sessions which are ordinarily reserved for science, reading, mathematics, finance, school buildings, personnel, public relations, and promotion policies. Not that these more prosaic but ever present problems won't be discussed. There will be case study presentations, reports of research, and debates of major educational controversies. But this year, out of a total of 100 group sessions, 23 will deal with some phase of the arts.

Running simultaneously with the group sessions on Monday, Tuesday, and Wednesday afternoons, will be continuous shows of art and music. These programs consist of the most faithful recordings of music, classified and presented in half-hour sessions, and of beautiful color slides of the great masterpieces of art, likewise classified and organized in half-hour showings.

Even the exhibits (nearly 500 are predicted) will reflect the theme of the convention. Artistic displays will accent the creative arts both in the general exhibits of books, teaching aids, furniture, supplies, and equipment and in the school building architectural exhibits.

Some 50 organizations will meet in connection with the American Association of School Administrators convention.

Presiding over the meetings will be AASA president, C. C. Trillingham, superintendent, Los Angeles, Calif., county schools.

### COMING CONVENTIONS

Dec. 8-9. Washington State School Directors' Association, Olympic Hotel, Seattle, Wash. Secretary: Elmer W. Stanley, 201 Capitol Park Bldg., Olympia, Wash. Attendance: 700.

Dec. 26-31. American Association for Advancement of Science, Sheraton-Park Hotel, Washington, D. C. Secretary: Dr. Dael Wolle, 1515 Massachusetts Ave., N.W., Washington, D. C. Attendance: 5000 Exhibits.

Jan. 8-9. Tennessee School Boards Association, Noel & Maxwell House Hotel, Nashville, Tenn. Secretary: Joseph W. Goss, 129 Cordell Hull Bldg., Nashville, Tenn. Attendance: 500 to 750.

Jan. 12-13. Minnesota School Boards Association, St. Paul Auditorium, St. Paul, Minn. Secretary: W. A. Wettergren, Box 367, St. Peter, Minn. Attendance: 2500. Exhibits.

Jan. 16-17. Arizona School Board Association, Westward Ho Hotel, Phoenix, Ariz. Secretary: A. N. Gandrich, 4833 North 31, Phoenix, Ariz. Attendance: 250.

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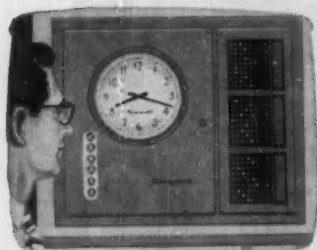
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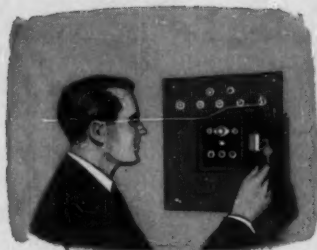
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# the AMERICAN SCHOOL BOARD JOURNAL

December, 1958

## Forming

What are some typical examples  
of major policy decisions  
made by an average city board?

## Board

How were these actual decisions  
formulated by the board  
and how were they carried out?

## Policies

**MICHAEL S. KLINE**

Principal, Garfield High School  
Garfield, N. J.

The importance of the policy-making function of a board of education can hardly be overemphasized in introducing a newly elected or newly appointed member to the board's duties, functions, and responsibilities. A clear understanding of the policy-making process is essential if the new board member is to fulfill his obligations effectively. The beginning superintendent, too, must have the same clear understanding of the policy-making process if he is to fulfill his administrative functions and effectively discharge his administrative responsibilities.

Many handbooks and guides for new board of education members stress this policy-making function, as do textbooks for school administrators. Although these handbooks, guides, and textbooks discuss the purpose, meaning, and importance of the policy-making process, rarely does the beginning board member or beginning superintendent find that these publications offer actual examples of policy making to give them a clearer picture of the development of board of education policies.

### One Source of Illustrations

An unpublished doctoral dissertation<sup>1</sup> describes actual illustrations of policy decisions made by a board of education in one district (the Princeton Borough, N. J., schools), detailing methods and patterns employed in forming and carrying out policy decisions. Of particular interest to board members and administrators may be the emphasis upon the relationship of the policy decisions to the development of a public school system.

This study was not devoted primarily to policies relating to the rules and regulations governing the routine

operation of a public school system, so that day-to-day decisions were not a part of this study except as related to a major policy-making area. Rather, this study was concerned with major problem-solving areas which faced the board of education and administration, and forming and implementing policy decisions to deal with these problem areas. Eight major policy-making areas were found to be of vital importance to the growth and development of the Princeton Borough public school system.

### Policy-Making Areas

These include the following:

1. The 1927 construction plans for a new secondary school plant, specifically designed for the purposes of secondary education and architecturally styled to harmonize with the Tudor-Gothic design of many buildings on the Princeton University campus. This area was important because of the decision-making situations presented by a public controversy over the site and design of the proposed new construction.

2. The 1954 plans for a \$1,770,000 expansion of the high school found the board of education meeting problems posed by official reservations of the Borough Council and Borough Planning Board, postponement of the bond referendum date, and the need to gain strong approval of the community.

3. The proposed consolidation of Princeton Borough and Princeton Township was a very important problem area for the boards of education of both municipalities, and proved to be a test of educational statesmanship.

4. The formulation and development of policies for more effective relationships with the pupils, parents, teachers, and administrators, and boards of education of the nine sending districts was an essential area for policy-making. One important outcome

<sup>1</sup>Michael S. Kline, "Policy Decisions in the Growth and Development of the Public School System of Princeton Borough, New Jersey" (Unpublished Doctor's Dissertation, Rutgers University, 1958).

was the development of the Princeton High School Lay Council.

5. The problem area of racial integration was met in the 1948 plans of the board of education. The board of education's policy decision, and the implementation of the policy decision, promoted a successful change in a strong community tradition.

6. Curricular changes and revisions pose definite problems, and this decision-making area includes significant procedures to adapt the educational program to the needs of the pupils.

7. Problems inherent in connection with the community's use of the schools faced the Princeton Borough board of education, and resulted in the development of the "Village School-house" policies.

8. The growth and expansion of the school plant caused a striking increase in the supervisory and administrative staff, and created several problem areas. One problem area in particular found the board of education faced with an emotionalized community reaction due partly to newspaper misinformation.

From the brief description of these decision-making areas, one may readily note that the problem areas faced by the board of education and administration of the Princeton Borough public school system correspond to the nature of problem areas faced by many board members and administrators in many communities in the United States.

Although no two communities are alike, the nature of the policy-making areas and the concrete examples of the experience of the Princeton Borough public school system in formulating and implementing its policy decisions may be of definite interest and value. Of even greater interest and value, however, may be the implications of this experience. As is well recognized, there are certain essentials or principles for the effective operation of the policy-making process. The formulation and implementation of policy decisions are two vital phases of the policy-making process; both require skillful leadership and high purpose if their effectiveness is to be realized.

"What is the goal or main purpose of policy decisions by an administration

and board of education?" "What basis should be developed for an effective relationship between the administration and board of education in reaching policy decisions?" "What personnel and research resources may be utilized in securing necessary data?" "What is the primary basis for the information of the community concerning policy decisions?" "What degree of flexibility may be necessary when the community raises objections to a policy decision?" — these questions point up several of the problems inherent in forming and accomplishing policy decisions. They indicate the type of essentials implied by the experience of the Princeton Borough school system.

#### Policy-Making Essentials

These essentials include the following:

1. An effective administration-board of education relationship based upon mutual respect of lay and professional provinces.

2. Formulation of the policy decision by the board of education and administration with the objective of promoting the greatest pupil growth and development while serving the best interests of the community.

3. Formulation of the policy decision after thorough and comprehensive study of a problem area by the administration and board of education, utilizing the resources of the staff, community, and professional consultants.

4. Flexibility of the board of education and administration in adapting a policy decision to valid reservations of the community, in order to achieve implementation of the policy decision yet meet the needs and desires of the community.

5. Public presentation of the policy decision, which clearly and fairly imparts full information to the community, utilizing public information procedures which effectively present the reasons for the policy decision.

It is worthwhile to report that policy decisions of the Princeton Borough school system were effectively formulated and implemented when the foregoing essentials were effectively realized. In the several instances in which the Princeton Borough public school system experienced difficulty with policy decisions, one or more essentials had not been effectively realized.

This study, in conclusion, may be of interest and value to members of boards of education and administrators, not only for the concrete examples of policy decisions, but for the implied essentials or guiding principles which seem to be fundamental to the effective performance of two phases of the policy-making process, the formulation and implementation of policy decisions. ■

### Keys to Successful Policies

- 1 An effective administration — board of education relationship **based upon mutual respect** of lay and professional personnel.
- 2 Forming policy decisions by the board and administration with the objective of promoting the greatest **pupil growth and development** while serving the best interests of the community.
- 3 Forming policy decisions after thorough and comprehensive **study of a problem area** by the administration and board, utilizing the resources of the staff, community, and professional consultants.
- 4 Flexibility of the board and administration in **adapting a policy decision to valid reservations of the community**, in order to implement the policy decision yet meet the needs and desires of the community.
- 5 Public presentation of the policy decision to impart in a fair and clear manner **full information to the community**, utilizing public information procedures.

# Individualizing Instruction

In Waukegan, Ill., the needs of each individual school determine what program or combinations of plans will be used for individualizing gifted instruction —



— Courtesy Waukegan News-Sun

## JAMES CAPRA

Assistant Superintendent in Charge of Curriculum  
Waukegan, Ill., schools

All children are required to go to school. It is the responsibility of the school to provide equal educational opportunity for each child to develop his native powers to the fullest extent. If each child were endowed with the same native ability to learn and possessed similar physical, emotional, and social characteristics, the task would be comparatively simple. Teaching would be simpler, but it would be reduced to an uninteresting and boring mechanical process rather than an art.

Generally speaking, a generation ago, schools were conducted in a manner which would indicate that all children possessed similar characteristics; or they were conducted as though children who were slower than average should be tolerated until such time as they arrived at the age to drop out of school. Gifted children were expected to stay with the class at the rate set by the teacher for average children. Occasionally a child was permitted to skip a grade with little or no consideration given to factors other than mental ability. There were teachers then who were far in advance of their times just as there are a few teachers today who are conducting classes in a traditional manner, but I venture to say the most advanced teacher of the earlier period was not as advanced as our more traditional teacher of today.

### Understanding Children

The outstanding educational advances made over the last generation or two have been our greater understanding of

children and a more sympathetic approach in our instructional program with reference to their abilities and limitations. No longer do we "fail" children indiscriminately or permit others to skip grades year after year. Both of these steps are complicated, necessitating consideration of social, emotional, and physical factors as well as mental ability. Educators are generally agreed a child should participate in the group in which he naturally functions best and in which he feels a sense of belonging.

Indiscriminate grade skipping and retention defeats the purpose for which the action was taken in the first place. In most instances, repeating a grade will not eliminate the difficulty a slow child experiences nor will a fast learner find it particularly helpful to skip a grade. Research indicates when retardation and grade skipping are practiced indiscriminately a slow child is unhappy in a class in which he is the oldest and possibly the largest, and a bright child all too often is a social misfit in the class in which other children are a year or more older. If the mental factor is the only criterion in determining grade skipping or retardation, it is generally found that the slow child remains, academically, at the bottom of the class and the bright child at the top.

Retention and grade skipping are desirable and should be practiced even more than they are in some schools, but only upon careful weighing of social, emotional, and physical factors as well as mental ability. The considered judg-

ment of many people should enter into such important decisions. The teacher, principal, parents, the child, and the special service personnel serving the school should help decide each case on an individual basis.

The philosophy of individualized instruction has benefited the slow child more than the bright child. It seems individualized instruction was interpreted to mean greater attention to those at the lower end of the educational ladder since the assumption was that bright children get along on their own pretty well. While this is true to some extent, it is also a truism that bright children waste away much of their talent; indeed, they often lose whatever they possess, by lack of nurture and by uninspired and unchallenging class assignments. They soon fall into poor study habits, slovenliness, and laziness, which may persist throughout lifetime. All of us can look back on our acquaintances or schoolmates and recall some very bright people among them who are engaged in some menial work far below their abilities or, even worse, some of whom are misfits constantly changing their jobs and in between jobs engaging in drinking, borrowing, gambling, and generally just wasting a lifetime. Not only is this a criminal waste of life, it is criminal in that the potential for contributing to the general welfare of man has never materialized.

Each school should weigh the advantages of all plans and decide which is most suitable for its own particular



"What appears to be best suited to a particular building is the determining factor in deciding what plan will be used."



situation, or adopt a combination or composite of the various plans for experimental purposes on a small scale for a year or two as a point of departure. After a period of one or two years the program should be crystallized and expanded. The assumption is, all plans have some merit and it is better to experiment with some rather than do nothing at all.

#### Waukegan's Eclectic Policy

In large school systems in which various socioeconomic groups reside and in which school buildings vary in size, such as in Waukegan, Ill., an eclectic philosophy has been the policy with reference to the education of the gifted. What appears to be best suited to a particular building is the determining factor in deciding what plan will be used. As a result, most of the plans are operating within the system as a whole, and all of them have been found to serve the purpose for which they were intended in each of the individual school buildings.

#### 1. Acceleration

As intimated earlier, acceleration (grade skipping) has been a policy in Waukegan only upon the basis of careful study and evaluation as previously described. A better plan than grade skipping is an ungraded school in which all children proceed at their own rates of speed and in which a bright child may complete three years of work in two years. Rarely, if ever, has it been found necessary to return a child to his original class. Generally speaking, only one year of grade skipping is advisable in K-6 schools.

#### 2. Partial Segregation

Partial segregation within a building has been found to operate best in one of our schools. Bright fifth- and sixth-grade children assemble under the direction of one teacher for one hour each morning while all other children are engaged in a reading lesson. The bright children are all good readers and can afford to miss this particular lesson rather than arithmetic, science, social

studies, or language arts. During this period children are permitted to work individually or in groups in the areas of their special interests. The projects are usually long term and upon completion written reports are submitted to the teacher and oral reports are given to the class. Many reference materials are available and free movement about the room is permitted in a workshop atmosphere.

In a smaller school a plan which is similar to the ungraded school is utilized for reading lessons and will be employed for arithmetic lessons also in the near future. Children are heterogeneously grouped by grades in this school, except for reading periods. At this time, fourth-, fifth-, and sixth-grade children are grouped on the basis of their reading abilities. A fourth-grade child may be reading with sixth-grade children and some with fifth-grade children and vice versa. Fifth-grade children will also be similarly placed, so that all are functioning at their own particular instructional level.

In a larger school children are grouped in the intermediate grades upon the basis of reading and arithmetic achievement for part of each day for instruction in these areas. Where three classes of fourth, fifth, and sixth grades are organized it is possible to form three groups at each level for reading and arithmetic instruction for part of each day. The home rooms are heterogeneously grouped for all other activities. The fifth grades, for instance, form three groups sometime during the morning for reading instruction, at which time they will join their groups under the direction of one of the fifth-grade teachers, possibly their home-room teacher, depending upon the teacher assignments. The same procedure is followed in the afternoon for instruction in arithmetic. Teachers agree among themselves which of them will teach the low, middle, or upper reading groups. Usually the teacher who works with the low group in arithmetic takes the upper reading group. The third teacher may work with both middle groups.

Usually the lower groups are approximately two years behind their grade level in achievement. The low fifth-grade reading and arithmetic groups begin with third-grade materials and are brought along as far as possible through the fourth-grade materials. The aim is to bring them up to within one year of their grade level by the end of the fifth grade. The test results at the end of one year in this program have been most encouraging. The low achievers heretofore regressed approximately  $2\frac{1}{2}$  months per year in reading. Test results with two low groups indicated a month average gain per child after one-half year, and approximately  $2\frac{1}{2}$  months' gain after a full year under this program. This represents a net average gain per year of approximately five months per child, a statistically significant gain.

The middle group usually completes the reading and arithmetic requirements of its particular grade level in one year. The upper group completes the reading requirements easily but rather than proceeding with the reader of the grade above, the teacher plans intermittent enrichment activities with some emphasis during the year upon literature, poetry, and drama. A similar procedure is utilized in the rapid arithmetic class.

#### Replies to Objections

There is no panacea for adjusting a program to meet the needs of all children. One may object to this type of grouping on the basis that it is undemocratic. The middle-of-the-road approach such as described above attempts to avoid this criticism by keeping all such grouping within the individual buildings rather than transporting children to central school locations as is practiced in some communities, and by grouping for part of the day only, rather than for the full day.

Another criticism is the children are grouped for reading and arithmetic at their instructional level, then thrown together again heterogeneously for science and social studies. It is true that just as wide a variance exists in these

(Concluded on page 56)

# Let's Work on the HIGH SCHOOL SCHEDULE

## SCHEDULING

the key to problems in—

- The matter of individual pupil load
- The challenge of providing broader curricular experiences
- The limitation of the length of the school day
- The number, nature, and efficiency of study halls

FLOYD A. MILLER

Nebraska State Department of Education

One of the important and difficult administrative tasks in all high schools, small and large, is that of working out a satisfactory class schedule. To put a program of studies into operation in such a manner as to provide the best educational opportunity for all students and at the same time achieve the necessary amount of administrative efficiency is a real challenge, even to experienced administrators. From the standpoint of policy making it also is of definite interest to boards of education.

### Some Basic Problems

Some basic problems which are involved in or interlaced with scheduling are: (1) the number, nature, and efficiency of study halls, (2) the matter of individual pupil load, (3) the challenge of providing a real breadth of experience in junior and senior high school, and (4) the limitation of the length of the traditional school day.

In too many instances the study hall is an assembly hall in which a minority of students are engaged in constructive work, from which discipline problems arise quite frequently and where there is much marking of time. Supervised study in the best sense of the term does not exist. Study-hall teachers spend more time policing the room than they spend directing and guiding students in work and study.

Individual pupil load has generally been limited by tradition, local practice, and in some instances by accredita-

tion policies to four courses. All this, along with the rigid Carnegie Unit, which in Nebraska was officially discarded some years ago, has tended to discourage experimenting in schedule making. And it also has a real relationship to the number of scheduled daily study halls for individual pupils. In an eight-period day, for example, it has not been unusual to find students with four "study periods."

Another important concern is that of providing a breadth of experiences in keeping with tomorrow's needs. There are so many worthwhile courses in good junior and senior high schools that contribute to growth and development. Many of these cannot be experienced if a student is held to the traditional load of four subjects. Neither schedule nor tradition should continue to deny opportunities to students who can handle an increased load.

For many years the school day has been thought of as a nine o'clock to four o'clock day. This, in itself, limits pupil opportunities, particularly if the activity program has been scheduled within the school day. The limitation is felt most keenly in those high schools in which all or most of the students are transported by bus.

### Some Approaches

Undoubtedly there are many ways to get at the issues which have been identified but it would seem necessary first of all to declare an independence from

the past, to rethink the objectives of the school, and to be willing to try some imaginative experimenting.

The adoption of a general policy requiring all students who can successfully do so to schedule themselves for a course or activity during each period of the school day would seem to be an obvious answer to both the study-hall problem and the challenge of broadening the individual student's program. This is also an effective way of actually lengthening the school day for these students.

The elimination of a major share of scheduled study halls would encourage a further development of the library as the center of study activity. Use of the library before and after school would need to be expanded. From time to time classes might spend periods of "directed study" in the library with the librarian assisting both teacher and students. Administrators, librarians, and teachers would plan ways and means of compensating for loss of study time on the part of those students who really use the study hall for study.

Another practical aspect of expanding a student's program is that greater utilization can be made of all special building areas but particularly of practical arts and vocational facilities. In the traditional four-subject program it often happens that pressures of various kinds force the choice of "academic" courses rather than fine and practical arts or vocational education. This makes

for limited use of facilities as well as denies some students the opportunity for a broad program.

Some schools would benefit through the fact that the large study hall could be turned into classrooms and laboratories. This would make for better building and room utilization and stimulate more effective supervised study activity in the classroom.

It is of interest, too, that students very frequently do better work in all courses when they are scheduled in some class or activity each period. Slow students make better use of their time when direction is provided. The more able can be challenged through additional or advanced-level courses.

### **Important Aspects to Consider**

Three things are of particular importance if the policy of fewer study halls and heavier individual scheduling is to be carried out successfully. Guidance services must be effective so that each student has a carefully planned program for each year of his high school experience. To "throw" everyone into the "every period" program without careful guidance would be disastrous. Good program planning in this connection calls for an understanding of each individual student, his abilities, interests, home and community life, and after-school work programs.

In setting up the "every period" program the logical place to start in the typical four-year high school is with freshmen. Psychologically they will probably be much more receptive to the idea than will juniors or seniors. And this is quite important to the success of the plan. Beginning as freshmen they can grow up with the plan and shortly the whole school will accept it as a matter of course.

As for the junior high school, it is hoped that some aspects of the self-contained elementary classroom will have been maintained so that the full schedule will fall rather naturally into the junior high pattern.

Second, the school must establish a sound and valid program of general education for all pupils. Otherwise an additional number of courses and activities coupled with too much freedom of selection might defeat the basic purpose.

In the third place, some real effort will need to be given to planning for and improving the supervised study opportunities in the class period. Too often supervised study follows an arbitrary division of the period and consists of—"Now, class, you have 20 minutes for study, let's get to work!" All classes will need to be thought of as laboratory classes. Some days the entire session may be a work session. On other days the whole hour may be devoted

to discussion, or to a sharing of the results of work sessions. In some instances there will be a division of activity with a portion of the period concerned with preparation for tomorrow. This time can often be used profitably by group and individual discussion of new terms and concepts, an understanding of which is necessary if the student is to get meaning from his study.

### **Supervised Study Essential**

The supervised study aspect of scheduling is of sufficient importance to justify a planned in-service program for the staff. Unless supervised study can be made really productive and challenging, and without becoming "spoon feeding" in nature, the whole idea of scheduling every period for most students will fail.

An additional consideration is that increasing the student load may in some cases require an expansion of course offerings which in turn may increase the number of teachers required. But in no instance should this result in a heavier teaching load, thus making creative teaching even more difficult to achieve.

If requirements are not increased and/or given an added flexibility for individual cases, we may find that we have multiplied our problem. For various reasons, some good students may wish to qualify for graduation a semester earlier than they normally would. In a few instances such acceleration may be desirable. But for the majority of students the full scope of activities and experiences found in the normal six semester senior high school cycle is better. Some schools are meeting the problem by requiring 170 to 200 semester hours for graduation rather than the typical 160 hours or 16 units.

The use of the semester hour as a measure of credit has an inherent flexibility with respect to scheduling. This flexibility has been exploited in relatively few schools. The semester hour plan makes it easy to schedule classes for fewer than the traditional five times a week, an idea which should not be overlooked in any consideration of changing schedules. There is nothing sacred about holding classes five days a week. Numerous elective courses might well be offered for two or three periods a week and for less than "full" credit.

### **Longer Class Periods**

Related to the directed study aspect is the possibility of lengthening the class period. Some schools are extending the "hour" period to 70 minutes. This plan has some obvious advantages, particularly for large senior high schools. There are some schools in Michigan, for example, which have adopted the 70-minute period with classes meeting

four rather than five times weekly. The total weekly time in these cases is sufficient to justify full credit.

If class periods are lengthened, and if more and more after-school activities are moved into the regular school day, it follows that there will have to be some modification of the school day either through fewer periods per week for some courses and activities and/or through a lengthened school day. Since the first idea has already been discussed briefly, particular attention will be given to the idea of extending the school day.

When bus routes are properly set up it should be no particular hardship to begin the high school sessions by 8:30 o'clock. Many schools, urban and otherwise, now follow this practice although the result is frequently earlier dismissal rather than a lengthened day. By beginning earlier, and by shortening the noon hour to 45 minutes, a total of 45 minutes can be gained even though dismissal takes place at 4:00 o'clock. This would permit a school day of six regular hour periods and one 45-minute period. In larger schools a closed noon hour with staggered lunch periods and a continuous scheduling of classes can contribute to more efficient programming. While no particular brief is held for these examples, it does seem clear that some lengthening of the school day is both imperative and attainable.

For schools whose buses transport elementary as well as high school pupils, earlier starting of the school day would create some problems. This suggests again the importance of using imagination. Perhaps a planned recreational program for the younger pupils both before and after their regular school day might be an answer. Then there are such activities as school clubs, student councils, and organized library sessions to utilize the lengthened day without making it too exhaustive.

### **Importance of Co-operative Effort**

Changes in scheduling, and in student programs, eliminating study halls as such, and lengthening the school day, can never succeed if planning for the changes does not extend out and beyond the administrator's office. Student body, staff, board of education, and community need to understand the advantages and disadvantages of proposed changes, need to have an opportunity to ask questions, make suggestions, and assist otherwise in planning the changes. Legitimate involvement of all interested parties will develop the understanding and support so necessary if improved educational opportunity is to result. Let's work together on that high school schedule so that it may make a greater contribution to quality education. ■



# Students: Our P-R Punch

Three weeks before the recent vote on our school expansion bond issue, the Evergreen Park, Ill., high school P.T.A. executive board met in a flurry of anxiety.

"A 50-50 chance of defeat is forecast" . . . "People don't realize that our school population has doubled since 1953" . . . "Not enough people have personal contact with the school to know its problems"—these were typical comments at the meeting, which was called to hear reports from the Citizens' Survey Committee.

## The Problem

The Evergreen situation was that of a fast-growing suburb with a 1950 population of 10,800 and a 1955 population of 19,600. The first high school had been built in 1954 to house 750 pupils, but had to be prepared to take care of 1000 by 1958. Most of these facts were only half-realized



**A house-to-house tour of student "Volunteer Bond Boosters" was a big factor in Evergreen Park's bond victory—**

## MARSHALL G. BATHO

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by a heterogeneous population which had overflowed into the region from adjoining Chicago.

A joint committee on educational needs, made up of housewives, businessmen, and public servants, had been selected the previous October by the school board to represent a cross-section of the community. The work of this committee had been summarized in an attractive folder, and the usual public relations work had been carried on with community organizations. However, among hundreds of new families, personal contact with the public school was wholly lacking. The school was not, in Evergreen, "our school."

Too many citizens were "bedroom" residents, with homes in Evergreen Park but jobs in Chicago, and owing full allegiance to neither. Our problem was the same as that of the many other metropolitan areas now multiplying across America: How do you bring civic responsibility home to a large suburban mass of people?

## Students to the Rescue

Fully aware of the school's needs because of this experience, and fired by the urgency of the situation as he heard it expressed by the P.T.A. leaders, the student council president asked the Superintendent's Advisory Council to let the students

appeal to their neighbors. "It's our duty to give the hundreds of young people coming after us the same high quality of opportunity that we have had," he told the council.

Unanimously the members voted to call an emergency assembly to explain the problem to the student body. Because voting would take place February 23 and the first date available for an assembly was February 14, the public relations deadline was imminent. The students attending the assembly heard a complete story of the situation from the board members in attendance: cost of expansion, tax increase, what was being built, why it was needed, the size of the proposed additions, and how many students the expanded buildings would be capable of handling. The student council president summarized the situation and told the students that they could show their loyalty and devotion to their high school and to their community in no better way than by uniting in a concerted effort in helping with the bond issue campaign. He suggested that they go from door to door and explain to the people in Evergreen Park the need for more and better school facilities and be prepared to answer the questions and objections of the people.

Thirty-three students, the "Volunteer Bond Boosters," as they called themselves, responded and went over all the information which they would need to carry to the individual voter, practiced speeches that would be short and to the point, and discussed questions that they had heard raised by opponents of the measure. From a list of names and addresses of these volunteers, council officers assigned teams to various areas of the village near their homes.

## The Campaign

Organized into teams, they were given a daily report sheet that was to be filled out and turned in after each meeting of the canvassers. These sheets contained such information as the date, how many homes had been visited, how many hours each team had worked, how many people seemed interested, how many didn't, and the common questions that were asked about the bond issue by the citizens.

The student council president compiled all the figures in the canvassing reports and found that with only 35 students and five evenings, they had visited well over 1500 homes.

After the polls had closed that evening and the votes had been counted, it was found that the bond issue which earlier had been given less than a 50-50 chance of succeeding had won by a nearly two to one vote. Members of the board of education stated that they felt the success of the bond issue was in a great measure due to the work accomplished by the "Volunteer Bond Boosters." It was also said that there had been a record turnout of voters for this type of election. ■

Some very basic thoughts  
on a perennial trouble area —

## A Look at Homework

— How much and what kind?

And the pros and cons of home assignments

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The highly controversial subject of homework makes its perennial appearance among all groups in any way connected, directly or indirectly, with schools and the school population. While it is the pupil who is responsible for doing the homework, and the teacher who assigns it, the transaction is by no means restricted to the pupil and teacher.

Parents, principals, supervisors, administrators, and board members—all seem to have definite attitudes toward homework and the subsequent problems it frequently engenders. These attitudes run the complete gamut, from those who believe that children should have no homework at any time to those who are highly favorable toward the practice.

Although there are those who denounce all home assignments and will continue to denounce them, home study has had and continues to have a traditional place in our American educational system. Though it may change form from time to time and from generation to generation, it seems likely that some form of home study will be maintained. Most school systems throughout the country continue to give home assignments in one form or another.

### Checking Home Assignments

When homework is assigned, it is

important for the teacher to check upon this work, to see that it is actually accomplished, and to note that something is achieved thereby.

In some places it is customary for the children to correct their own papers or each others' papers in school the following day. Even when this is done the teacher usually collects the papers to look them over briefly. Regardless of whether it be a home study assignment or a classroom assignment, the assignment made by the teacher must be called for by him. Educators are agreed that little or no desirable learning is achieved when teachers make assignments and then rarely hold students responsible for them.

### Amount of Homework

The amount of time that a child is expected to spend in home study varies greatly in the different localities. In general, however, the consensus of opinion among the more conservative indicates that a maximum should not exceed one hour in the upper grades, and half an hour in the intermediate grades. None should be given in the primary grades.

### Place to Do Homework

When homework involves writing or study, it is highly important that the child have a definite place to do it. He certainly will not get much accom-

plished if home assignment must be made in the family living room with other people either televising, listening to the radio, or carrying on different types of conversation. The child can go to his own room if he has one; otherwise, some other portion of the house should be assigned. When no other place is available, suitable spots for study can be arranged in the attic or in the basement. Not much more is needed than a table, a chair, and adequate light.

Another important item in the achievement of home assignments is deciding upon a definite time to do the work. If unprovided, it may occasionally become totally neglected as the child is more interested in some outdoor game or goes off to play with neighbors or with other children. It is better to decide in advance upon the time that will be allotted to home study.

The parent who constantly interrupts his child in the midst of a game will not only irritate the child but may also develop within him an intense dislike for study, for school, and for all that is related to school learning. Once the child realizes that homework is his own responsibility, it will be wiser for the parents to allow him to arrange the time he wishes to provide for it, and then observe whether he holds to the time agreed upon. If the child learns to budget his time, he will see to it that the home study is not neglected.

### Do It Himself

When work is assigned to be written it is of the utmost importance that the child *do* the work himself, rather than copy it after someone else has worked it out for him. When the latter occurs, little, if any, real learning takes place. The child only learns to get others to do his work. If the child has difficulty with a certain problem or other point in the assignment, a parent might help him over a difficulty by explaining the matter to him. This is entirely different from copying out answers worked by someone else, without understanding how they were achieved.

Homework can greatly aid in the development of the child's character and personality as well as his academic achievement. Properly assigned and properly fulfilled, home study can build habits of self-reliance and responsibility and, when group assignments are made, of co-operation and working with others. Again, when the nature of the assignment is such as to permit it, a considerable amount of learning in related areas can be achieved.

### Variety in Method

Different methods may be employed in home assignments. Homework may involve some written work; it may be

purely study; it may be some form of individual or group activity. Again it may be wise for teachers at times to give assignments over longer periods than day-by-day requirements. In this case, however, the parents must cooperate with teachers so that such lengthy assignments are not left until the day before they are due.

The case of Jimmy offers an example in point. By way of a project the fifth-grade teacher had given his class the two weeks' assignment in geography. He had carefully estimated in advance the amount of time and noted that the majority of children in his class could complete the work within about five hours. This meant an average of 30 minutes each evening, five evenings a week. The assignment was given with the date due two weeks hence.

Jimmy, always an A student in his class, was interested in other recreational activities at this time, and said nothing about his geography assignment to his parents. Then came the final Thursday evening. There was company in the house and he remained downstairs until about nine o'clock, when he politely excused himself saying that he must go upstairs to get his homework. After more than an hour his dad observed that he was still working very diligently.

When the guests left around 10:30 or 11 o'clock, Jimmy was still working industriously, but his dad insisted that it was time for him to go to bed. Quite an argument ensued, for the work had to be handed in the next morning. The parents, still unaware of the nature of the assignment, never surmised that it had been given two weeks earlier. Deeming the teacher unreasonable, they sent Jimmy to bed. With their permission, however, he set his alarm clock for five o'clock the next morning.

Nothing daunted, the lad promptly arose and continued to work diligently until time for breakfast, about 7:00 a.m. Being a very quick and bright student, he did get his work accomplished and took the completed project to school that morning, without ever telling his parents that he had neglected his homework for two weeks.

It was several weeks later when one of the parents happened to meet the teacher, and the latter expressed his satisfaction over the fine work Jimmy was doing. At this point the parent inquired as to the reason for such an extreme amount of homework one evening. Then the truth came out!

#### Practical Home Assignments

Such simple matters as meal planning and setting the table can prove practical home assignments stemming from the class in health and hygiene. When most of the children in the

classroom belong to the Boy Scouts or the Girl Scouts, what they do on scout night can take the place of a school assignment.

Other home assignments may be certain portions of projects carried on in the classroom. Some children may possess manipulative skills and be assigned the making of a certain portion of such as geographical and other social studies projects. Some may do modeling, others frame work, others collecting materials needed in the project. Some may even be assigned specific library work necessary in carrying on the project.

Even the listening to radio and television programs can afford good assignments but only if these are checked by the teacher, if they are well chosen, if they possess worthwhile positive values and, above all, if they are not in any way harmful to the child.

Another valuable form of practical homework is recreational reading. Here, of course, there must be supervision that the right kinds of materials be made available to the children.

With the aid of administrators or supervisors, or even of the children themselves, the teacher may ascertain the types of magazines coming into the home and see whether these be suitable for the age level of the child. Some homes do receive regularly several good children's magazines. Again, it may be arranged that children take home books from the school library. These assignments may help to bring back the values of what has often been termed

"a lost art," namely, recreational reading in the home. The cultivation of good reading tastes and habits is certainly a valuable objective to pursue in home assignments.

It may be well for a new teacher in a community (and the older ones, too) to check for the facilities which this community offers for home assignments. There may be such interesting places as museums, art galleries, filtration plants, fire stations, newspaper plants, and dozens of others that are conducive to the stimulation of learning on the part of the children. It is true that skills in music and in art depend greatly upon native ability, yet much of the cultural value of these can be learned by even the elementary school child once his interests are aroused.

Despite their arguing pro and con, most parents do expect their children to have some sort of homework, particularly after they leave the primary grades. Properly planned, properly assigned, and properly checked in a follow-up, home assignments can be very beneficial to the child. They can also serve as fruitful steppingstones, bridging the gap between home and school, between parents and teachers.

Further than this, they can serve as a means of improved community relationships. Oftentimes it has happened that a community has taken cognizance of its educational institutions because the home assignments of the teachers necessitated the pupils' contact with various agencies within the community.

## Trends in Homework —

In Greenwich, Conn., the allotment of homework has been raised from one hour and a half per week to one and two thirds a day for grades seven and eight. Ninth-grade students will be required to do one and two thirds hours a day, in addition to a six-hour school day.

In the K-6 schools, the work allotment was raised to 60 minutes for grades three through six; two or more assignments requiring 150 minutes per week will be required for children in grades five and six.

In North Kingstown, R. I., the school board, considering a district

policy toward homework, were almost unanimous in stating that school children should be assigned homework in moderate quantities well before the system's current homework-starting time in grade seven. One recommendation was: 15 minutes for third graders and 20 minutes for fourth graders.

In Windsor, Ont., the high school principal, in advising parents how to help their children cover their increased schedule, suggested "proper lighting and a quiet atmosphere . . . for efficient study, and a pupil cannot be expected to give his attention to a subject with the radio or television blaring in his ear. Learning in a high school is not child's play and cannot be accomplished when the student is bothered with distractions."



In the so-called newer types of homework which are carried on in the home or in various centers in the community much can be accomplished. Improved facilities within a community have often resulted from a home project. These are but the follow-ups of certain interests of the children which have been initiated in the school. They also enhance wholesome, co-operative understanding within the family and within the community as a whole.

#### Experimental Studies

Experimental studies dealing with homework in the various school subject-matter fields have led to the conclusion that such homework actually causes no observable increase in growth of school learning. In a summary of such research up until 1941, Henry J. Otto reports, in the *Encyclopedia of Educational Research*, this same lack of growth in academic achievement. Summarizing the research of the following decade, the same author reports in the 1950 edition of the same *Encyclopedia of Educational Research* that: "Compulsory homework does not result in sufficiently improved academic accomplishments to justify the retention of the achievement argument as the chief justification for home study assignments." Cooke and Brown, after an experiment in 1935 for the specific purpose of determining the value of homework, concluded: "Nothing is to be gained in the way of achievement by requiring elementary school pupils to study at home."

Despite all controversy, it seems that home assignments in one form or another are still part of our traditional system of education. Many agree with one view on homework: "Besides its educational benefit, homework is a distinctive contribution to character building." However, one must be cautious in the amount, type, and kind of homework he assigns. Not all homework aids in character development. Only when intelligently planned and carefully utilized can it contribute to character development.

Certainly such homework which violates the principles of the psychology of learning and which fails to take family circumstances into account cannot be considered educationally sound. There is much need for scientific study and investigation in the all-enveloping field of homework. In the first place, it must be of such a nature as to have some direct benefit for the child. Over and above this, properly handled, it can prove a valuable asset for public relations among home, community, and school. It is particularly in this area that administrators and board members can greatly assist the classroom teacher. ■

## What's Wrong with Merit Rating?

C. A. SHERMAN

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Salaries for teachers based on performances have received increased attention during the past decade. Reasons for this are not hard to identify. In the first place, teachers can no longer claim that they are working for starvation salaries. The public has shown a willingness to pay for good education but at the same time this public demands good teachers. In the second place, it is obvious that superior performance is recognized in all other professions, as well as in industry. The question is why is it not recognized to a greater extent in the teaching profession?

#### Opposition to Merit Rating

Teacher organizations, per se, oppose the merit system for the establishment of salaries. The chief hue and cry seems to be that teaching cannot be rated and all schemes for rating are subjective. This argument is surprising, since it comes from a profession that is constantly judging others—pupils. All of us are constantly judging the other professions—medical, dental, legal, etc. We are laymen judging professionals. But with merit rating, it is the case of professionals judging the professional.

Tenure and rigid salary schedules provide a most restful haven for mediocre teachers. These are the ones who predominantly resist merit rating, and do not want a competitive profession. They are not anxious to have their work compared to their more capable fellows.

Some are aware of the fact that teachers are already in part on the merit system. For instance teachers are selected on merit in the better school systems. Teachers receive promotions on merit. It is sad to note one of the few ways to recognize good teaching is promotion to supervisory or administrative positions. With this practice many good teachers have been lost to the professions. First-rate teachers should be paid sufficiently well so that they do not have to "move up" in the profession to receive a greater salary.

Many school administrators and heads of teacher organizations are favorable to the lock-step method of schedule making. That is the easy way to do it. There is no criticism except from the public that is beginning to demand a merit system of salaries for teachers. (It is unfortunate, indeed, that reforms frequently must have an exterior origin.) Almost everyone in the community knows who the good teachers are. Ask any of the nonprofessional personnel in the school, and you will receive some logical answers.

As a corollary to the merit system for salary increases, it would seem more high quality persons would be induced to entering the profession because of the realization that productive effort would be rewarded as it is in most other lines of endeavor.

#### The Plan in Brentwood

The writer has worked under the merit system. He has administered it for 14 years, and from all indications a great majority of the teachers are favorable to it.

When he came to Brentwood, Pa., two years ago, the board of school directors were of the opinion that across the board salary increases did not seem fair and just. One of the reasons for this feeling was that a premium was placed on longevity. Furthermore, it does not take a professional educator to realize that the correlation between years of experience and performance is not 100 per cent positive.

The plan was explained to the teachers several times. Many questions were asked. When a secret ballot was taken, the count showed a vote of almost three to one in favor of trying the plan.

Salaries have been announced for the 1958-59 school year and no formal complaints have come to either the principals or the superintendent. As a matter of fact many teachers have commented about the fair treatment. The writer's experience with merit salaries has not been adverse in any serious respect. The teacher morale has always been high.

In establishing the salaries in Brentwood the superintendent and principals met at least four times and discussed each case individually. Before the salary list was ready for presentation to the board of school directors, the principals and superintendent had defensible reasons for each salary increase.

The inauguration and practice of the merit salary systems requires that:

1. Teachers be requested not to discuss their salaries with each other.
2. The basic salary schedule must be high. In Brentwood's case it is above the state mandated schedule.
3. At least 40 per cent of the teachers must be receiving merit salaries.
4. Teachers must feel free to discuss dissatisfaction with either the principal or superintendent.
5. There must be a mutual respect between the teacher and administration.
6. The board of school directors must not waver after the salary schedule has been adopted.



a plan for a continuing

# NATIONWIDE SCHOOL CENSUS

W. W. CARPENTER  
and KENNETH D. OLIVER, JR.

It seems quite clear that only as children are "discovered" and "kept track of" can there be universal education.

## Indications of Need

Very early, Heck emphasized the desirability of national as well as state uniformity.<sup>1</sup> A little later he outlined a program for maintaining a state-wide school census.<sup>2</sup>

In 1940 Segal and Proffitt stated that the major purpose of a continuous school census was to keep an account of all children of school age and to have available estimates of future school needs. They advocated that the continuous census be extended to the state as a whole.<sup>3</sup>

In 1953 the U. S. Office of Education issued a handbook which listed the items of educational information that every state department of education should have available annually.<sup>4</sup> This handbook listed 17 major census items.

Looby's study of Missouri in 1956 pointed out that "school personnel were

aware of the advantages of state uniform recording but were not aware of the advantages of national uniform recording."<sup>5</sup>

An article in 1956 by one of the authors of this article closed with this paragraph:<sup>6</sup>

Clearly on the basis of our national security as well as on the basis of equality of educational opportunity we need to know where the children of America are

<sup>1</sup>Looby, Arthur J., *An Inventory of Permanent Cumulative Pupil Record Systems in Selected Missouri School Districts*, Doctoral Dissertation, University of Missouri, 1956, pp. 184-187.

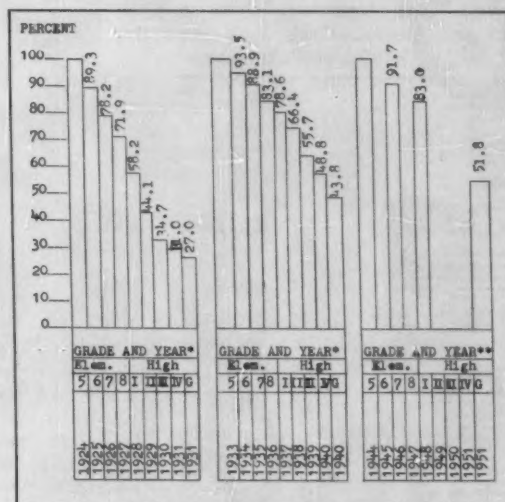
<sup>2</sup>Carpenter, W. W., "A Nationwide Continuous School Census," *SCHOOL BOARD JOURNAL*, Vol. 133, No. 4, Oct., 1956, pp. 31-32.

located, their advancement in school, their health record, their movement from school district to school district within the state and to and from other states. We need to know these basic facts in order to assure equality of educational opportunity to all and, what is also very important, to assure the perpetuity of our America. . . .

The survival rates of pupils progressing through the public schools revealed a real need for a nationwide continuing census.

In three separate years, the per cent of the public school enrollment in grade five in the United States, retained and graduated from high school eight years later, increased from 27.0 per cent in 1941 to 51.8 per cent in 1951. It is

FIGURE 1.  
Per cent of Public School  
Enrollment in the U. S.  
in Grade 5, in 1923-24,  
1932-33, and 1943-44,  
Retained and Graduated  
in 1930-31, 1939-40,  
and 1950-51



\*Foster, E. M., *Survival Rates of Pupils*, U. S. Office of Education, *Circular No. 193*, 1941, Table 2.

\*\*Gaumnitz, W. H., *High School Retention by States*, U. S. Office of Education, *Circular No. 308*, 1954, page 11.

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startling to note, however, that nearly 50 per cent of the pupils enrolled in the fifth grades of the public schools of our nation in 1943-44 were not graduated from high school in 1951.

The migration of public school pupils from state to state also reveals the need for a nationwide continuous census. This may be illustrated by a study of the state of birth of the graduates of the public high schools of Kansas City, Mo., in 1956. These pupils were born in nearly every state of the Union and in many foreign countries.

TABLE 1. States of Birth of 2468 Graduates of High Schools of Kansas City, Mo., in 1956

Alabama-----	9	North Carolina-----	1
Arizona-----	5	North Dakota-----	0
Arkansas-----	56	Ohio-----	13
California-----	22	Oklahoma-----	38
Colorado-----	20	Oregon-----	1
Connecticut-----	0	Pennsylvania-----	10
Delaware-----	0	Rhode Island-----	0
Florida-----	0	South Carolina-----	3
Georgia-----	6	South Dakota-----	0
Idaho-----	3	Tennessee-----	8
Illinois-----	31	Texas-----	39
Indiana-----	6	Utah-----	1
Iowa-----	29	Vermont-----	0
Kansas-----	190	Virginia-----	3
Kentucky-----	5	Washington-----	2
Louisiana-----	11	West Virginia-----	4
Maine-----	0	Wisconsin-----	5
Maryland-----	4	Wyoming-----	4
Massachusetts-----	1	District of Columbia-----	2
Michigan-----	9		
Minnesota-----	7	<b>Foreign Countries</b>	
Mississippi-----	10	Austria-----	1
Missouri-----	1828	Dutch West Indies-----	1
Montana-----	2	Ecuador-----	1
Nebraska-----	24	Germany-----	6
Nevada-----	0	France-----	2
New Hampshire-----	0	Holland-----	1
New Jersey-----	3	Latvia-----	1
New Mexico-----	4	Mexico-----	2
New York-----	25	Poland-----	2
		Sweden-----	1

Compiled by Herbert A. Sang, Kansas City, Mo., schools.

TABLE 2. Number of Students Enrolled in the Senior High School of Springfield, Mo., in the Fall of 1957 Who Have Attended School in Each of the States of the U. S. and the District of Columbia

Alabama-----	3	North Carolina-----	1
Arizona-----	20	North Dakota-----	3
Arkansas-----	35	Ohio-----	4
California-----	82	Oklahoma-----	25
Colorado-----	19	Oregon-----	4
Connecticut-----	2	Pennsylvania-----	2
Delaware-----	1	Rhode Island-----	0
Florida-----	8	South Carolina-----	3
Georgia-----	2	South Dakota-----	0
Idaho-----	3	Tennessee-----	10
Illinois-----	26	Texas-----	40
Indiana-----	5	Utah-----	0
Iowa-----	20	Vermont-----	0
Kansas-----	71	Virginia-----	7
Kentucky-----	14	Washington-----	10
Louisiana-----	5	West Virginia-----	0
Maine-----	0	Wisconsin-----	5
Maryland-----	2	Wyoming-----	7
Massachusetts-----	0	District of Columbia-----	1
Michigan-----	8		
Minnesota-----	2	<b>Foreign Countries</b>	
Mississippi-----	1	Alaska-----	2
Missouri-----	372	Ceylon-----	1
Montana-----	2	China-----	2
Nebraska-----	9	England-----	4
Nevada-----	2	Germany-----	5
New Hampshire-----	0	Ireland-----	1
New Jersey-----	1	Japan-----	1
New Mexico-----	6	Philippines-----	1
New York-----	8	Tibet-----	1
		Turkey-----	1

Compiled by Dr. A. M. Alexander, Springfield, Mo., schools.

Another indication of the need for a nationwide continuous census is the number of pupils who have attended school in states other than the one in which they were enrolled currently. Students enrolled in the senior high school of Springfield, Mo., in the spring of 1957 had attended school in the District of Columbia and all the states of the union with the exception of eight.

In 1957 one of the authors of this paper completed his doctoral study at the University of Missouri. This study made a distinct contribution by presenting a plan for a nationwide continuous school census.<sup>7</sup>

The following plan<sup>8</sup> for a nationwide continuous school census is presented in the conviction that its salient feature would, if instituted, improve the conditions surrounding school census practice throughout the nation.

One point of clarification of necessity must be made. The recommended plan is national only in the sense that it is intended to make uniform provision for all the 48 states. It is not national in the sense that any national agency would be involved in the administration of state systems. It may well be that nationwide uniformity in continuous school census practice could be achieved through the co-ordinated efforts of the several state departments of education in striving toward the same or nearly identical goals.

#### The National Plan

1. State legislatures should require that a state-wide continuous school census be established and maintained in all states. This requirement should be general in nature, and should not prescribe in detail the procedures to be followed. It should, instead, require that state departments of education establish minimum regulations and requirements relative to the continuous school census.

2. State legislatures should require that all children, within specified census ages, be included under the provisions of the continuous school census.

3. State legislatures should require the several state departments of education to especially note all handicapped children in the continuous school census, indicate their location, and describe the nature and extent of their disabilities.

4. State departments of education should study the problems associated with the establishment and maintenance of a continuous school census within their respective states, and should establish minimum regulations and requirements for a continuous school census.

<sup>7</sup>Oliver, Kenneth D., Jr., *A Proposed Plan for a Nationwide Continuous School Census*, Doctoral Dissertation, University of Missouri, 1957.

<sup>8</sup>*Ibid.*, pp. 201-202, 203-206.

5. Each state department of education should create a division of census within the state department of education. A director of census should be employed as the administrative head of this division. An adequate staff of persons trained in child-accounting activities should also be employed.

6. The function of the division of census should be to assume the leadership in improving continuous school census practices on the local school district level through: research services, consultative services, the constant advisement of local school district officials on methods of improving the taking and keeping of continuous school census information.

7. The division of census should prescribe and provide the basic forms, records, and reports that will be needed in conducting the continuous school census on the local level.

8. The division of census should maintain up-to-date records of pupil migration within and between states, as well as estimates of pupil populations. It should also require regular and frequent reports of continuous school census information from local school districts. All of the information so assembled will be of use in long-range educational planning on the state level; specifically, these data may be used for:

- Planning for future school building needs
- Predicting kindergarten and pre-school enrollments
- Checking enrollments
- Changing school district boundaries
- Checking on attendance
- Research studies
- Estimating school population trends
- Identifying special groups of children for the purpose of making state-wide provisions for them.

9. The division of census should prepare and disseminate a manual of directions for conducting a continuous school census.

10. The division of census should recommend a variety of methods for keeping the census up to date in local school districts. Inasmuch as possible, local school districts should be empowered to utilize information from all sources, agents, and agencies deemed necessary to the maintenance of up to dateness in the local continuous school census.

11. The division of census should recommend:

- Procedures for transferring pupils within the state, and to other states
- Possible uses of continuous school census data on the local school district level
- Methods of taking and filing continuous school census data
- Procedures for administering the local continuous school census.



With stress on more math, science, etc. —

## Why—The Industrial Arts

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Main Street, U. S. A., in 1958 is a great deal different from that same street in 1908. No longer is it possible for youngsters to stand by the "open door" to watch the village blacksmith with his sinewy arms and blackened

hands twist red hot pieces of metal into shapes for use on wagons, plows, or ornamental fences. No longer is it possible for them to watch the local miller. One finds that the local grist mill has all but disappeared. Broken paddle wheels and a heavy growth of bushes covering the once proud building are but reminders of days long past. The chance to watch a system of conveyors in a continuous production line to process flour is not available to these children. Nor is the slaughtering of animals, gathering food, making clothing, and helping "raise a barn," a part of the experience of most present-day youth.

Even the gasoline stations that dot the corners of many crossroads do little "real work" on automobiles other than feeding the bottomless gas tanks, cleaning windows, adding water to steaming radiators, and opening cans filled with a syrup-like liquid called 20 or 30 weight. When these chores are completed, engine hoods are closed with a snap and the attendant does not even have to calculate or make change—he just looks at a dial and writes figures on a pad.

On some farms, huge combines line up in precision order and with an insatiable appetite shear a field of wheat so it looks like a new mowed lawn. Trucks with bodies groaning and tires bulging move the precious grains to storage bins—finally, some of the grains appear as a loaf of bread in a super market.

These scenes can be repeated and repeated with the products of industry that are a part of the lives of all of us. From everyday plates to Sunday china dishes, from bicycles to automobiles, from dog houses to home dwellings,

Last year's Sputnik launching may well have been the "October Revolution" of U. S. Education, opening up a new era in our schools and our curriculum.

In the area of industrial arts and vocational education, there have been changes, and this three-part survey considers some of these new concepts —



the new look in

IA VE

## "The industrial-arts curriculum area can be to students in school

from doll dresses to a closet full of clothes, youngsters see end products but have little or no chance to learn the romance of their manufacture. The inspiration, the sweat, the search for new products, the never ending process to improve life and make a better world escapes most children of today.

Where in the education of our boys and girls will they learn about the "behind the scene" activity? Where will they hear the clang of metal so characteristic of forge work, feel the heat of a white hot ribbon of steel, listen to the pulse beat of the drop hammer, smell the odor of plastics, feel the dampness of the moisture laden air of a spinning room, use a well-balanced tool, fabricate products with earth and synthetic material, control machines, and work hard at worthwhile tasks? It is in this area of living that "the industrial arts" makes its greatest contribution to the education of all youngsters.

### The Industrial Arts

If we subscribe to the postulate that a major purpose of education is to transmit a way of life, then the industrial arts must become a part of the total education program so as to reflect today's complex industrial life. From the earliest time to the present—even more so in the future—man will need to work with tools, materials, and machines. These are the things of technology which give body to ideas formulated in the mind. The industrial arts, as a curriculum area in the schools, provides the setting for students to learn about industry—the user of technology—and experience the act of creating from materials, new and different forms which have greater human value. In so doing, students will be able to understand and be sensitive to materials, processes, machines, tools, principles, applications, operations, opportunities for work, quality of products and service, maintenance, achievements, the significance of technology and its effect on society and the individuals within that society.

Like the curricula areas of language arts and social studies that have courses like creative writing, history of literature, penmanship, English, drama, world history, current events, and American government, the industrial arts offers courses like laboratory of industries, transportation, general metalwork, electricity/electronics, graphic arts, general woodwork, and ceramics for students to learn about the technical side of society—man's control over his environment. The industrial arts makes its contribu-

tion in all levels of public education; elementary, junior high, and senior high school.

### In the Elementary School

In the elementary schools, industrial arts activities enrich the broad units of instruction. The students work with common materials like paper, clay, rags, pieces of wood, metal, clothing, and leather by direct experience. Hand tools provide in the main the devices by which these materials are cut, molded, drilled, and shaped to meet the needs of the learners. Some limited power tools may be introduced in the upper grades. These direct experiences lay the groundwork for understanding our technical society and the interrelationship of goods and services to everyday living.

"How many sixths are there in a third?" asked a fourth grader of her teacher after a session with the problem. "I still don't understand," the little girl said. The teacher then took a pair of scissors, a pencil, compass, and a piece of paper and cut a circle into six equal parts for her. Without hesitation, the child said, "Oh yes, I see now. It is two sixths." Abstract concepts can be made more meaningful with concrete evidence. The foregoing illustration is one of many ways in which tools and materials can be correlated with teaching units.

Forming clay bowls and pots like the Indians did when this country was young makes their civilization in a social studies unit come to life. A farm yard built to scale has a great many implications. How paper, clothing, pots, pans, food, and scores of other things are produced and the importance these things have in the lives of children is made clearer by direct experience with them.

### In the Junior High School

The industrial arts as an integral part of the junior high curriculum (grades 7, 8, and 9) provides boys and girls with the opportunity to experience work in many different aspects of industry. Laboratory of industries, woodworking, metalworking, ceramics, drawing, textiles, and graphic arts are but a few of the broad subject matter courses that may be offered. The basic industrial processes, including tools, machines, and materials with their related human problems constitute the source of curriculum content. Emphasis in this program is breadth of industrial understanding and experience in as many activities as feasible. One has but to watch the expression on the face of a seventh grader the first time he uses a jigsaw

instead of a handsaw to cut a piece of wood. The importance of "power" is fully demonstrated in this act. Alert teachers capitalize on direct experiences like these to give real meaning to understandings so difficult to teach.

This important period of life for the young adolescent needs school experiences which help him achieve self-confidence, aid him in the choice of a career, and help him acquire a set of values which will help guide his behavior. Sampling many kinds of work is one way in which youngsters find out their interests and abilities. This self-analysis is vitally important since the choice of selecting a curriculum in the senior high school is not far away.

Over this three-year period, the student can decide more intelligently on his own goals. The world of work or advanced education holds for him some apprehension but planning and building a project, working side by side with his fellow classmates in a more natural social setting, experimenting, and completing worthwhile tasks help dispel anxiety about the future by giving him confidence to handle problems in the present.

### In the Senior High School

Senior high school industrial arts provides the opportunities for students to receive advanced work in various courses sampled at the junior high school level. It is particularly valuable for students with interests and abilities in the technical and scientific fields. A detailed study of a local or a national industry gives students insights into mass production principles; importance of interchangeable parts; quality control; plant organization; personnel; time study; materials handling devices; automation; importance of jigs and fixtures; the need for detailed drawings; experimental prototypes of products; and the constant struggle of industry to improve quality, increase production, and reduce costs.

A well-rounded senior industrial-arts program includes advanced courses reflecting a variety of industries. Understanding how production principles apply to industries where techniques of manufacture differ radically points out to students how industrialization affects all people. New methods in transportation, communication, manufacture, and the development of new ways of generating power are constantly affecting the lives of all of us. The result of the application of this new technology in these fields necessitates constant revision of curricular materials in industrial arts so as to reflect these changes.

## what technology is to adults in industrial life."

The industrial arts provides the student opportunities to use what he has learned in physics, chemistry, and mathematics. Building a machine using a vacuum pump to cause atmospheric pressure to force heated sheet plastic against a curved mold is but one of many examples of applied science in action. Making a working model of a rocket engine or electric computer are other examples. The opportunity for correlation of the physical sciences and mathematics with the industrial arts exists—ways must be found for the student with a science background to work, experiment, and develop in so far as possible, new processes and new materials. Men like Franklin, Edison, Armstrong, Curtiss, and Westinghouse may come from this group.

### In Summary

In the elementary school (grades 1-6), the industrial arts offers enrichment to the broad areas of study such as: home and school, neighborhood, community, lands of other people, life in America and other lands. The industrial arts helps develop a clearer understanding of the people who do the work of the world. The students learn the use of hand tools, some machines, materials, and processes as they affect

people in making the world a better place in which to live.

The junior high school provides for all boys and girls a variety of experiences to discover their interests, abilities, and attitudes with regard to industrial life—its occupations, processes, tools, materials, and machines. These experiences help provide a basis for helping students make a choice of a career and help them become better consumers and understand industrialization and its impact on society.

Senior high school industrial arts provides all-round technical understanding, opportunity for correlation with the physical sciences and other courses, for intensified study of technical problems related to industry, for an increased level of competence in the use of tools, machines, and materials. It provides the graduate with a fundamental understanding of our technical society and a broad technical background for ready adjustment to a changing world.

The schools must provide a qualified teacher, a place to work, enough tools, machines, and materials to serve these students. The industrial-arts curriculum area can be to students in school what technology is to adults in industrial life. To be educated liberally today, one needs technical understanding. ■



"The schools must provide a qualified teacher, a place to work, enough tools, machines, and materials to serve these students . . . To be educated liberally today, one needs technical understanding . . ."

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A plea for  
using "local talent" in —

## Selecting Shop Equipment

JACK FABER

Advertising Manager  
Industrial Arts  
and Vocational Education

As an intelligent man, would you purchase a new automobile from a dealer minus a steering wheel because you could get the car \$10 cheaper than a fully equipped comparable car, offered by another dealer? You say, "Certainly not!" Then why install lathes in a new school shop not equipped with faceplates or centers? Without faceplates and centers, lathes are as useless for the instructional needs of the students and their instructors as a wheelless automobile is to your driving needs.

Would you permit an interior decorator to select the furnishings of your new home completely independent of your and your wife's tastes and desires? Again you say, "No." Then why furnish the new school shops minus the advice of the occupants in charge—the shop instructors?

Would you let someone outside the family locate the furniture in your new home without asking your and your wife's willing and able co-operation? "No," again. Then why leave the school shop planning almost exclusively to someone outside the school system?

These questions may seem at first to be completely unfounded and to represent un-

common and isolated situations. And still it is true that in smaller communities purchases of school shop machinery and tools and the layouts of shops in new schools are handled in this way. Our large city systems are mostly free of this problem of improper layouts of new school shops and unwise purchases of new shop machinery. The large cities employ educators capable of preparing complete specifications. They avoid the bad practices described above.

Incomplete specifications for shop machinery always involve added purchases later on. In the long run, these delayed purchases are more costly to the school district by a considerable sum.

Many of the millions of dollars expended today for new school construction are spent, however, not in the large cities but in the rural areas, the small towns, and in suburban communities where the population is booming. Birth rate statistics clearly show the growth to come will be in these areas rather than the large cities, and it is for this reason that school administrators in smaller school districts must face the issue of sound methods of school



shop planning. Present policies and procedures in this regard are haphazard at best in many small school districts, and in suburban areas.

Most of the trouble originates between the time when the bonds are approved and the contracts for the building are let.

Superintendents, boards of education, and business managers all too often pass on the specifying and buying of shop machinery to the architect or builder. In effect, they confess their own lack of knowledge in this area. In the vast majority of cases, the architects and builders are in no better position to specify machinery for school shops than are the school executives. Existing local rulings may alter the handling of the problem, but certain basic fundamentals can be applied in many situations.

First, the top team of school administrators must decide the physical size and shape of the shops. This is an essential part of the overall task of the educational planning of a new school building. The writer believes that the shop instructor or supervisor should make well considered general recommendations to the superintendent at this point. Only the superintendent knows fully the emphasis to be placed on each instructional activity, and only he is able to properly allocate and balance the amounts of physical space to be devoted to the school shops and to other instructional areas consonant with the total

educational program.

Second, the chairman of the shop department in an existing school in the school district should be invited to meet the school architect and review the plans in these formative stages. If the instructor is to be responsible for the curriculum, he should not be penalized by withholding authority which will implement this responsibility. This recommendation is based on the premise that few superintendents, board members, or architects are intimately acquainted, as is the shop instructor or supervisor, with the importance of the physical aspects of a school shop as related to shop curriculum. Academic instructors do not face a multiple activity room as does the shop man, nor need they concern themselves with problems of safety, etc., as does the shop instructor. Who better understands the importance of shop lighting than the man whose students are using power machinery?

In districts where no shops exist in the school system and the proper help cannot come from within, the highest type co-operation can be secured from the state departments of education, from a local university or college, or even from neighboring school districts where shop instructors are employed. The better type of representatives of shop machinery manufacturers will also give help.

While built-in ducts for carrying off

shavings and sawdust, may represent progress in shop planning, the improper location of traps for such ducts can result in the forced misuse or little practical use of certain types of machinery.

Third (and perhaps the key to the entire matter), why delegate to outsiders the responsibility of writing machine specifications? "Consultants" are often employed by the architect because the latter is not an educational expert. For a comparatively small compensation, the architect can engage a consultant. But it is help from outside your school district. For a lesser expenditure the work can be accomplished more efficiently by the school staff. Who is better qualified to specify machines suited to the local curriculum than the man who is doing the teaching?

If administrators should fear that such liberality with the shop department might result in a huge expenditure, the fears can be allayed by setting a limit on the total sum to be spent. Paring down expenditures by discarding the last two pages of an instructor's original requisition—and it is done—is the height of administrative stupidity.

Fourth, if the architect upon advice of change in the shop plan by relocating a door or closet or windows, he should immediately inform the shop instructor so that the latter may check the effect. The relocation of machinery by the architect, due to plan revisions without regard for the shop curriculum, or knowledge of the use of a given machine, can set off a chain reaction of serious errors. This often happens after the architect has submitted a plan to a shop consultant. The harm cannot be corrected because the consultant has long since departed from the scene.

The preceding four steps can do much to eliminate needless errors in new shop planning and arrangement. The school shop machinery orders should be placed by the school board. If for local reasons the building contractor does the purchasing under the architect's supervision, no harm can be done to the shop curriculum provided the planning was initiated by the staffs and the specifications were written by them. No architect or builder can refuse to follow the specifications set up by the local board of education.

In addition to a general state of confusion which results from such planning and procurement errors, a much greater problem comes into focus—the problem of shop teachers who cannot properly conduct their classes until the term is weeks and months old. It is not right, inadvertently or otherwise, to hinder the education of the children when these hindrances can be avoided.

To summarize: when building a new school which will include in its educational program specialized industrial education areas, a board of education should work closely with a representative of the industrial arts department in initiating machine and tool specifications. In no other way is it possible to insure a well organized operative program of instruction with little or no delay, with needed economy, and with contented members of the instructional staff. Such a situation will insure the highest qualities of instruction for the school district. ■



When selecting equipment for the industrial-arts areas of a new school, the board of education should work closely with its industrial-arts department in initiating machine and tool specifications.



# The William E. Grady Vocational High School

**HANK BLOOMGARDEN**

New York, N. Y.

Over the years it has been unfortunate that the term "Vocational High School" has been the subject of considerable misinterpretation by students and the public. Somehow, many individuals have regarded vocational education as an adjunct to the reform school, whose designation often is something like "Industrial Home for Young Men," or as an adjunct to the continuation school concept which has provided part-time education and training for a limited number of hours each week for boys and girls who had quit school to go to work.

Actually, the term "vocational training"



Views of the mural and sculpture: above, the main entrance; below, the passageway between the auditorium-gymnasium building and the shop-classroom building on the right.



— Photographs courtesy of Architects Associated

An exterior view of the William E. Grady vocational high school, Brooklyn, N. Y. — Katz, Waisman, Blumenkranz, Stein, Weber, Architects Associated, New York, were the architects. Dr. John J. Theobald is superintendent in New York schools.



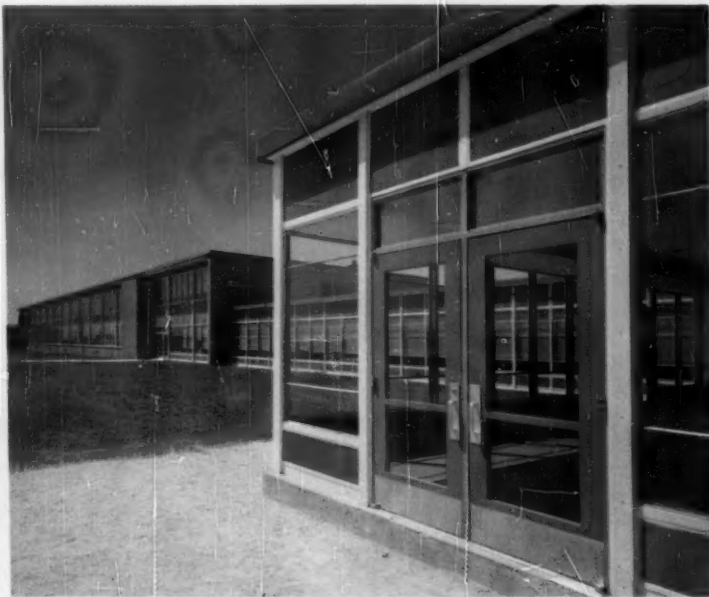
Meet a cost-conscious





*The porcelain-enameled steel panels in this school are new, but they have already passed the test of time. Panels like these have been used for more than 20 years. No other coated panel has a service record like this, because only steel can withstand the very high temperatures needed to fire the highest quality enameling frits. The finished surface is like glass—no pores, no place for grime or moisture to seep in. Rainfall keeps them clean.*

## beauty from Joliet



The Hufford Junior High School in Joliet, Illinois was built at a surprisingly low cost because steel window-wall construction is economical. Window walls are light, so less foundation and structural materials are needed. It's a fast way to build, so it reduces labor costs and equipment rental fees. The total window-wall area was 14,844 square feet, which included panels, sash and glass.

This modern way to build deserves your special attention. United States Steel produces quality USS Vitrenamel Sheets for porcelain-enameled, stainless steel, bar sections for window sash, and structural sections for framing. For more information about steel window walls, write to United States Steel, 525 William Penn Place, Pittsburgh 30, Pennsylvania.

*USS and Vitrenamel are registered trademarks*

Hufford Junior High School, Joliet, Illinois  
Architects & Engineers: Childs & Smith, Chicago, Illinois  
Gen. Contractor: Mercury Builders, Inc., Forest Park, Illinois  
Panel Fabricator: The Erie Enameling Company, Erie, Pa.  
Window Wall Manufacturer: Fenestra, Inc., Detroit, Michigan

**USS United States Steel**



Below is a view of the automotive service station shop of the William E. Grady vocational school. At the right is one of the plant's sheet-metal shops. The views illustrate the extensive equipment of the shops.

## Inside the Shops —



might be applied to the training one receives in what we commonly refer to as "professional" schools — schools for the training of doctors, lawyers, even engineers who, incidentally, may eventually become "Professional Engineers." However, the term has not been that loosely defined and it has been quite usually limited to those educational institutions which have developed to provide for two broad needs of the nation, the individual, and the economy: first, to take the place of the apprenticeship systems under which virtually all craftsmen and artisans received their schooling until the rapid growth of industry outpaced the ability of apprenticeships to provide for the needs; and second, to provide training grounds for the thousands of young men and women to whom income, rather than college, must be the next step after high school. Since there are so many in this category, and since, in any event, our institutions of higher education have such limited classroom and enrollment space as to preclude the admission of all graduates of the academic high schools alone, it is obvious that the vocational high school has rendered, and will continue to render, an important public service in the preparation of young men and women for positions in industry, commerce, agriculture, and even domestic life.

With the realization that the vocational high school is directly related to the economic needs of young people and the nation, with an appreciation of the public's understandings about vocational education, and with a feeling that vocational education need not inhibit cultural growth nor eliminate a sense of pride in the institution,

the architectural firm of Katz, Waisman, Blumenkranz, Stein, Weber, New York, viewed the challenge of the William E. Grady vocational high school.

### Creative Designing

In designing this school, they were determined to provide a place of beauty as well as utility, a place which would stimulate learning as well as a sense of pride, a place which would train the individual and provide facilities for numerous community activities, a place which would best utilize the site without affecting the integrity of the neighborhood, a place which would provide optimum facilities for training and education consistent with the number of students to be served.

The school itself is an example of the creative results of modern technology and fine artisanship. The materials selected include the most modern that industry can produce — glazed brick, tempered and heat-resistant glass, enameled metal wall panels, aluminum sash, and plastic-faced wall block. However, since materials alone do not result in a successful building, the architects decided that they would emphasize the spirit of the school and suggest the purpose of its program and of education generally, by adding the creativity of two world-famous artists, Ben Shahn and Constantino Nivola.

The inspiration of these artists took shape in mural and sculpture, and this inspiration has been transmitted into the reactions and enthusiasm of the students and faculty. For the façade of the school, just above the main entrance, Mr. Shahn executed a 50-foot mosaic mural some eight

feet in height. This mural, with its colors as variegated as those of nature, has a simple and eloquent theme, namely, that technological advance, devoid of intellectual, moral, and spiritual advances, will become a blight upon mankind. The mural portrays some of the destructive potentialities of science and technology deprived of enlightened outlook, and indicates that man has, within his own capacity, the ability to destroy himself or to expand his civilization to new horizons.

From left to right, the mural reads as follows: A series of forms which are fragmentary representations of the most advanced mechanical devices, symbolize a reign of technology. Among the forms are seen elements of twisted steel, suggestive of Hiroshima or a tottering Arch of Triumph. Next is seen the figure of man plunging headlong downward, suggesting that a world of advanced science and skills, bereft of spiritual values, may witness the fall of man. The central panel introduces a new mood. It is dominated by the figure of the Phoenix, the mythological creature which dies amid flames and is reborn out of its own ashes. This symbolizes man's power of self-regeneration.

The next section of the mural is introduced by the figure of an artist or architect who grasps in his hand the tools of his profession. His expression indicates indecision as to which way to turn — whether toward destruction or toward technological advancement enhanced by social values. The final episode of the right-hand section of the mural shows Maimonides, the philosopher. He holds an open book on the pages of which appear the words: "Teach



At the right is the school's science shop which illustrates the block walls, the asphalt tile floors, the fluorescent lighting which is found in all of the schools' shop and classroom areas. To integrate theory and application in vocational educational instruction, the school has classrooms and shops on opposite sides of the corridors, as illustrated below by the main floor plan.

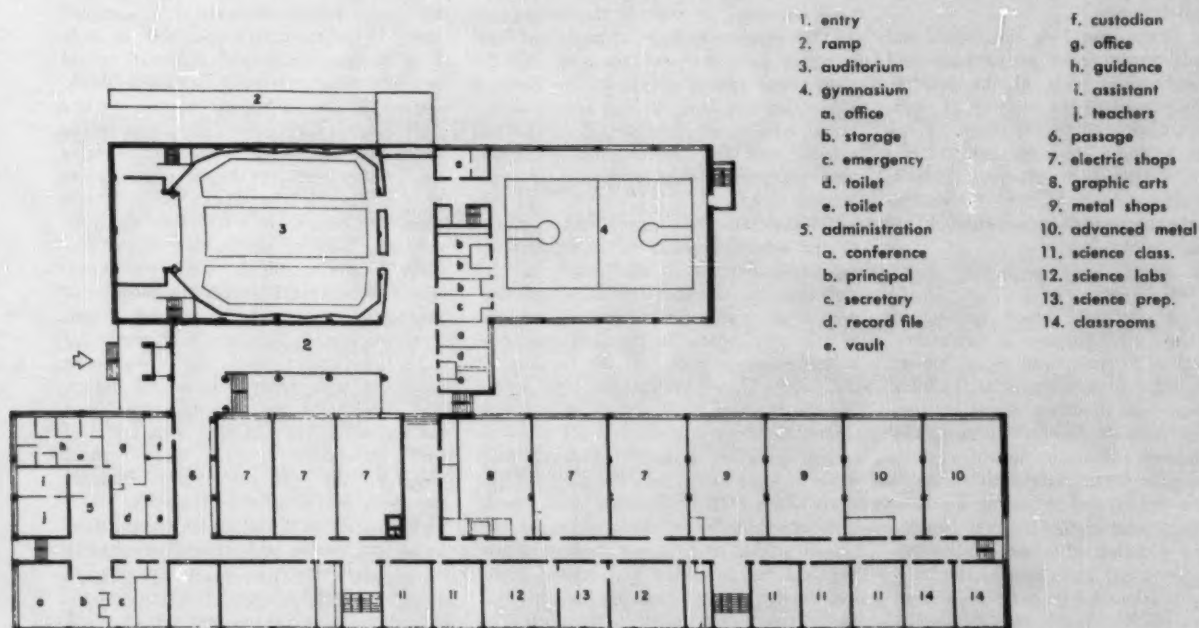


thy tongue to say 'I do not know,' and thou shalt progress."

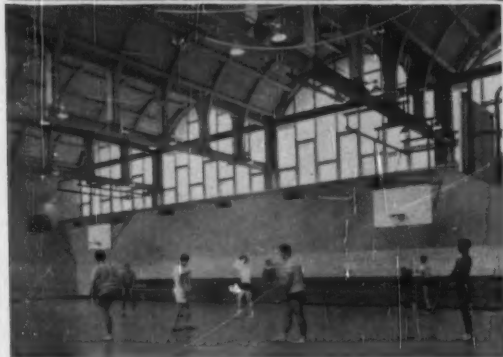
In his sculpture, Constantino Nivola visualized the conception of the vocational high school and translated this into

a symbol understandable to all. Hence, Nivola has used hands as a major symbol representing the student's development, and these hands convey to the student an appreciation of his capacity to use his hands.

Yet, Nivola's work also conveys the idea that the student, in learning to work capably with his hands, must have an awareness of the great teaching and thinking that can be sources of guidance. Hence,







Above is a view of the Grady auditorium, which seats 800 students. At left is the school's well-equipped gymnasium.

books and intertwined mathematical symbols are depicted. The entire sculpture — the hands, the books, the symbols, represent man's ability to record and transfer knowledge and to release it in the form of creative artisanship.

So the Shahn mural on the façade and the Nivola sculpture on the outside wall of the auditorium wing of the building have been related to the purpose of vocational education, and to the desire of the architects to build, to communicate, and to inspire. Responses of students, faculty, and visitors, as well as the community, indicate the successful accomplishment of this primary aim.

#### Specialized Shop

The Grady school, which opened its doors to some 2000 students in September, 1957, contains 33 specialized shops. Among these are shops for woodworking, building construction, boat building, metal machining, electrical work, motor wiring, radio and television, domestic heating, sheet metal and pipe fitting, automatic controls, automotive repair and servicing, mechanical drawing, painting, sign making, photography, and printing. A close relationship between theory and application — the basis of vocational education — has been accomplished by placing shops and classrooms

on opposite sides of a sound-insulated corridor.

These vocational shops, the heart of the school, have been laid out by a team of educators, the architects, and shop planning engineers, to provide the atmosphere and the equipment in an arrangement most effective as a tool for teaching. All the shops have special provisions for showing film strips and films, storing special audio-visual equipment, displaying products and exhibits, and for conducting demonstrations with equipment, display panels, or chalk boards.

To maintain the comprehensive nature of the school, a series of classrooms are provided adjacent to the shops, for instructions in the social studies, sciences, related arts, and complementary subjects of the curriculum. In this connection, it is interesting to note that the faculties of the nearby Abraham Lincoln high school and the William E. Grady vocational high school, have recently worked out a co-operative program whereby students from either school may take courses at the other. Thus, Grady students will benefit from the broader academic base of the Lincoln school, and Lincoln students whose technical and scientific and related interests cannot be satisfied at Lincoln, will benefit from the excellent facilities at

Grady. Fortunately for students and faculty alike, the two schools are no more than a few minutes walk apart, for it is this proximity that permitted the development of this unusual program.

#### The Auxiliary Wing

At the Grady school, the architects have provided a separate wing which houses a large, well-equipped gymnasium, an auditorium which accommodates 800 persons, and a large cafeteria which opens to the outdoors. While maintaining complete unity with the entire body of the school, this wing serves the dual purpose of making certain facilities available for community activities without infringing on school programs running at the same time. The gymnasium is ideally lighted from above with a series of barrel vaults which allow light to come in above eye level of players and spectators. These unique barrel vaults also serve to implement the acoustical balance of the gymnasium by concentrating, rather than diffusing sound. The auditorium, developed after extensive acoustical studies, resulted in a new form for the room itself, hung inside the shell of the building. Various reflective and absorptive materials have been used to create a room which minimizes reverberation and provides optimum acoustical level for lectures, motion pictures, and other activities.

From the lobby of the auditorium and gymnasium inside the building, which is reached by a wide ramp from the entrance to the school, there is an exterior ramp which leads to the mall, terraces, and play fields.

#### Meeting Limitations

In approaching the entire design project for the Grady school, the architects had to face certain area and zoning limitations. These factors led to a determination for a multistory solution with the classrooms and shops in the main structure, and the auditorium, gymnasium, and cafeteria, in the separate wing previously described. Working within the limitations imposed by site and zoning regulations, and due in no small measure to their excellent working relationship with the board of education of the city of New York, the architects were able to achieve a structure which incorporate striking design and layout features without sacrificing economy of operation and maintenance. Yet the purpose of the school — to teach, to train, to illuminate and inspire, has been fully met.

In the Grady school, utility has been combined with artistic form and design. The community has been integrated into the school as the school was intertwined with the community. The Grady school represents the creativity of the architects and those who worked with them — all of whom regard architecture as a means of social expression and realization, and a school particularly, as an opportunity to serve our most important resource and asset — our youth and our man power. ■

After you've applied principles of economy  
in design, construction methods, and materials —

## Insist on Economical Engineering, Too!

HAROLD W. BOLES

Newark, Ohio

8.

Many times, we expect the architect to hold school building costs to a minimum, criticizing him severely if he indulges himself in any nonfunctional "frills" and yet we may simultaneously ignore extravagances in the engineering of the building. This despite the fact that mechanical engineering features alone (heating and ventilating, plumbing, and electrical installations), not counting structural engineering features, often account for one third or more of the total amount of money required for construction contracts! Some architects rigorously apply all known principles of economy in their architectural design, in construction methods, and in the use of materials, but still allow their en-

gineers to waste precious building dollars. This is particularly true if the engineering is done by a "consulting" firm.

It is fairly common practice for architects to have no engineers on their own payroll, instead contracting with a "consulting" firm for engineering each new structure designed. In such instances, the fee for the engineers is usually based on the total contracts for those branches of the work which they lay out. One can see that there is considerable temptation for unscrupulous engineers to "fancy up" their work, if they profit more as their part of the work costs more. Too often, the architect has little knowledge of and no taste for engineering matters, so he unquestioningly accepts what the engineers hand

him. Sometimes this is true, even when the engineers are on his own payroll!

Yet, according to educator-architect teams who responded to a questionnaire on economy in school construction, there are many savings possible on engineering features, too — possibly enough of them that *such features alone can make the difference in whether a building is considered an expensive building or an economical one.*

The opportunities suggested for saving money on engineering features in school construction follow in the order of their significance, according to our respondents.

1. *Keep the plumbing system and fixtures simple.* Back-to-back toilet rooms, plumbing "cores," and concentration of areas requiring plumbing are some of the

## Sources of School Building Economy

While some of Dr. Boles's basic recommendations about the achievement of school building economy (the list includes over 260 points) may not apply to the schools you are building in your district, it is possible that many of the ways would enable you to prune off your school construction bills.

This small-sum pruning, which many school plant authorities indicate is the only real way to save building funds, may well add up to large-sum savings. Savings can be achieved with relative ease when boards, administrators, and architects co-operatively utilize a comprehensive inventory such as Dr. Boles' to gain an over-all picture of school building costs and then realize in which area unnecessary expenditures can be avoided.

This last installment of the eight-part listing considers the important department of engineering. As with the other articles, the suggestions were analyzed by a corps of school plant experts for true economy — economy that lowers costs without diminishing educational values of the building — and

then rated for *proved worth* by recognized builders of 86 "low-cost" schools in 34 states.

Other articles in the series:

1. What the Administration Can Do to Reduce School Building Costs (May, 1958, SCHOOL BOARD JOURNAL, pp. 52-54)

2. Proper Educational Planning Can Help Reduce School Plant Costs (June, pp. 39-40)

3. The Right Architect Can Save You Money (July, pp. 26-28)

4. How to Save Money on Sites and Site Development (August, pp. 21-22)

5. Equipment Is Important to Economy (September, pp. 49-50)

6. Some Construction Methods Cost Less Than Others (October, pp. 38-39)

7. Materials Used Can Vary Costs (November, pp. 46-47)

(Your JOURNAL for January will contain an announcement containing when reprints of this series will be available and the cost of the reprints.)

## In applying these suggestions boards should "strive for economy, not indigence."

specific suggestions. Of course, simple (but good quality) fixtures and fittings are to be preferred over ornate ones. Pipe lines behind shelving cost less than those in "pipe tunnels"—and are more easily accessible for repair.

2. *Provide artificial lighting which is adequate, but not overdesigned.* Don't use three rows of fluorescent fixtures in a classroom if two rows will provide the necessary lighting. Don't provide 100 foot-candles if only 30 are necessary.

3. *Zone the heating so that parts of the building may be heated independently.* This is particularly necessary if there is extensive evening use of certain school facilities by community groups.

4. *Hold special lighting and electrical facilities to a minimum.* There are differences in intensity required according to the tasks to be performed, and these tasks should be carefully analyzed and the rooms illuminated accordingly. Similarly, some rooms may require wall receptacles at 2-foot intervals, but it would be asinine to equip every room so, regardless of use. A rheostatic control is almost imperative on a stage or in some science laboratories, but it is virtually useless and unnecessarily expensive in many other classrooms.

5. *Omit "standby" heating facilities which will not be needed for normal heating.* It does no particular harm to shut down school for a day or two (and pupils welcome those unexpected vacations!) the one time in 20 years when a boiler may break down, and such a procedure is much less expensive than having an otherwise unneeded boiler stand idly rusting or otherwise deteriorating during all those other years.

6. *Use a heating system which does not require a high stack.* Usually, fuels such as natural gas or oil require a lower stack (chimney) than does coal. Of course, fuel costs will need to be compared in any area to know whether the saving on stack construction will really be a long term economy.

7. *Do safe structural engineering, but don't "pad" any elements.* If an engineer uses a 24-inch wide foundation footing where a 12-inch wide one will do or an 18-inch deep beam where a 16-inch deep one is adequate, you may be certain of one of two things—either he is trying to increase his fee, or he is unsure of his own abilities.

8. *Give attention to providing proper artificial lighting rather than to seeking secondary sources of daylight.* Many educators feel that, if boys and girls have some window area in classrooms so that they get the "illusion of space,"<sup>2</sup> it is less ex-

pensive to provide whatever supplemental lighting is needed from artificial sources rather than from secondary sources of natural lighting. Skylights, clerestories, monitors, etc., do admit welcome daylight, but they are expensive both initially and from a maintenance consideration, and they require special provision for light control (also expensive) in these times when visual aids are used almost daily in the classroom.

9. *Study the ultimate cost of light fixtures.* The writer's suggestion that incandescent fixtures be used is quite controversial. It is an accepted fact that for a given amount of illumination, incandescent fixtures cost less to install, while fluorescent fixtures cost less to operate and maintain. Thus, potential savings in initial cost must be carefully weighed against potential savings in operation and maintenance for your particular community before deciding which you should use. There are instances where it is claimed that the difference in operating and maintenance costs is so slight that the saving in initial cost possible through the installation of incandescent fixtures would far more than pay that difference for the life of the building!

10. *Hold water circulation distances to a minimum.* Grouping of the facilities requiring plumbing is probably the best means of accomplishing this.

11. *Use insulation where you can.* This is an instance of where you may need to spend a little more initially in order to effect long-term over-all savings.

12. *Adjust the amount of sound control to the area and its use.* Some areas may require acoustical treatment on the ceiling and all four walls, while others may require no such treatment. Activities to take place in each area must be carefully analyzed and the area treated accordingly. There are many thousands of dollars wasted on unnecessary, improper, or improperly placed acoustic materials in school buildings.

13. *Design the heating system for normal temperature ranges rather than for extreme cold that rarely occurs.* If the heating system is designed to heat all parts of the building properly in 10° below zero weather, it will keep building temperatures above freezing that one time in 50 years when it gets to 25° below. True, you may have to dismiss school that day, but that is better than paying what you would have to pay for a heating system that would provide adequate heat even on the day when it may be 25° below zero.

14. *Don't have mechanical ventilation exceed requirements.* Most states have requirements in excess of what is necessary for comfort, so don't let your engineer

"add a little extra." If you do, on cold days you will just use more heat (blowing it outside)—and on warm days teachers will open all the windows anyway, thus unbalancing the mechanical ventilation system and rendering it virtually useless.

15. *Keep plumbing installations down to only what is required by code.* Again, codes in most states require more plumbing fixtures than experience finds necessary with a comfortable margin, so do not succumb to the temptation to put in more "just to be on the safe side." If your code isn't realistic, then work to get it changed rather than to have engineers decide the number of fixtures on no basis other than their particular whimsy.

16. *Keep duct work simple.* A special shaped stainless steel duct probably won't conduct heat any better than a rectangular galvanized one—but it will cost more.

17. *Be sure acoustical materials are washable and paintable.* Initial cost will be a little more if acoustic materials are both washable and paintable, but such an installation will save a lot of money over a period of many years.

18. *Use a secondary source of daylight in some classrooms.* It is recognized that this suggestion and No. 8 are dichotomous, but there are those persons who feel that including a secondary source of daylight can, under certain conditions, save enough on the cost of artificial illumination to pay for its installation.

19. *Don't provide more than three vented sash per classroom.* The fewer the movable sash, the less the cost—and the less the opportunity for air and water leaks.

20. *Use a pole-and-crib electrical installation in place of an inside vault.* If a location can be found where the rather unsightly pole-and-crib will not offend aesthetic sensibilities, it can be much less costly than the massive vault often required where transformers are placed inside a building.

21. *Use grilles from the classrooms to the corridor and use the corridor for return air.* Such use of the corridor is much less expensive than a special, separate return air plenum, and the corridor has to be heated anyway.

22. *Make use of all the latest developments in electrical distribution.* This would include such possibilities as the special (higher) voltage lines, newly developed transformers, and aluminum wiring.

23. *Weatherstrip windows and doors.* Another case of spending more initially to save money eventually.

24. *Use warm air heating.* This, too, is controversial, but claims that such a system can save money, particularly in small structures, seem well founded.

<sup>2</sup>See "Materials Used Can Vary Costs," SCHOOL BOARD JOURNAL, November, 1958, pp. 46-47.



25. Use light fixtures which are an integral part of the ceiling. Several such fixtures are available, and if the ceilings to be used are of a type which can adapt the fixtures, their use probably can save money over a completely finished ceiling with suspended fixtures.

26. Use lightweight diffusing curtains for light control. This seems to be a genuine trend in the use of light control devices. Fireproof diffusing curtains are available in a wide range of fabrics, colors, and prices. They can add to the decorative scheme and help with acoustics and solar heat gain, also.

27. Use manual heat control for offices and other small areas. Expensive automatic controls probably cannot be justified in small areas designed to be occupied by only one or a few individuals.

28. Use individual room heaters. Again, initial savings (which can be considerable) need to be weighed against possible increased operating and maintenance costs for your particular area.

29. Design glass areas to make use of solar heat. This probably is going to be widely used in the future, and might be a real savings. However, care must be taken that the solar heat is properly used, not just admitted.

30. Use radiant floor heat. The writer personally feels that there is no economy in this in most situations, but a few respondents indicated that such a system had saved them money.

31. Use home-type heaters. (See no. 28.)

32. Use floor grilles for perimeter heat distribution. If this is done, it can make radiant floor heat unnecessary. The use of grilles for distribution has many possibilities, regardless of the source of heat, and can result in considerable saving over some of the more conventional systems of heat distribution.

33. If the climate in your locality permits, use several small heating units in lieu of a central heating plant. Such a scheme seems particularly feasible in "finger," "cluster," or "campus" type buildings. Experience seems to indicate that, in addition to saving money in capital outlay, the use of several heating units may make it easier to make repairs and may avoid school shutdowns if heating fails only in one area.

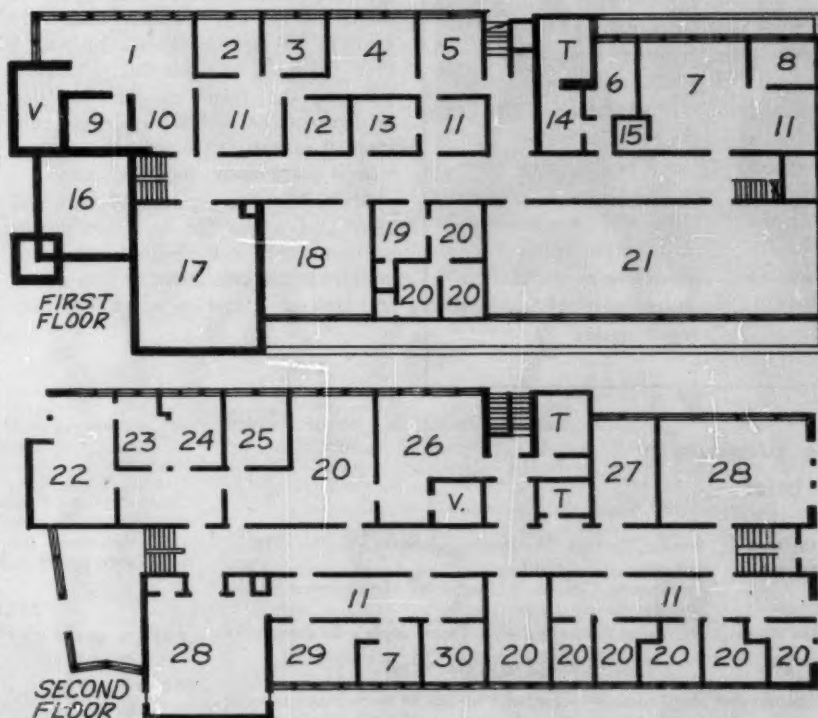
\* \* \*

In closing this series of articles, the writer wishes to reiterate his belief that there are some communities in the United States which can afford luxuries, even in schools. For those who cannot afford luxuries, these suggestions indicate some possible sources of savings. In attempting to apply the suggestions, we urge that boards of education strive for economy, not indigence—for prevention of waste, not penury. Schools consisting only of four walls and a roof are not enough to make future citizens aspire.



### A FUNCTIONAL ADMINISTRATION BUILDING

Housing the entire administrative-supervisory staff of the Warren, Ohio, schools in one building, the district's new administration building, a two-story structure, is steel framed with brick and concrete block masonry walls. All interior partitions, except corridors and toilets are completely movable. The cost of the structure, 14,990 square feet in area, was \$280,000. The building is 60 by 142 and has a parking area for 85 cars on its 10.7-acre site. The architect of the building was Arthur F. Sidells; superintendent in Warren is Dr. Sanford F. Jameson.



- |                                       |                              |                                |
|---------------------------------------|------------------------------|--------------------------------|
| 1. Census, work permits               | 9. Attendance-pupil accounts | 21. Mail-duplication           |
| 2. Pupil-personnel co-ordinator       | 10. Waiting room             | 22. Order department           |
| 3. Psychologic guidance worker        | 11. Secretary                | 23. Assistant business manager |
| 4. Clinic-conference                  | 12. Health service           | 24. Business manager           |
| 5. Speech-hearing                     | 13. Social worker            | 25. Clerk-treasurer            |
| 6. Lunch room                         | 14. Lounge                   | 26. Payroll-accounting         |
| 7. Work room-storage                  | 15. Dark room                | 27. Library                    |
| 8. Director of instructional services | 16. Unexcavated              | 28. Conference room            |
|                                       | 17. Equipment and storage    | 29. Superintendent             |
|                                       | 18. Heating and Ventilating  | 30. Assistant superintendent   |
|                                       | 19. Dentist                  |                                |
|                                       | 20. Office                   |                                |



## an interview with NSBA president Carl B. Munck

What's planned for the many school board members and their friends who will attend the 1959 NSBA convention in San Francisco? What are the major challenges of the NSBA? — This conversation with the current NSBA head previews the upcoming national convention and looks ahead into the association's future to examine its major problems.

Mr. Carl B. Munck, the 1958-59 NSBA president, has been a member of the Oakland, Calif., board of education since 1942, and its president for three terms; president of the California School Boards Association in 1953 and 1954; chairman of the California Educational Study Council; and member of the executive committee of the California Commission on Public School Administration. Mr. Munck is also active in church, fraternal organizations, civic, and legal circles.

**Q:** Mr. Munck, you've chosen as the theme for the 1959 NSBA annual convention, "Improving Education — A Free People's Responsibility." Since selecting the theme is the unofficial privilege of the NSBA president, would you tell us why you believe this subject area is particularly important now?

**MUNCK:** I am convinced more and more that unless the American people are impressed with their obligation to improve public education, we won't have the kind of education which we must

have if we are to survive. I think that all of us need to realize the pressures, obvious and concealed, that are upon us for centralization of controls, and to recognize the threat which they represent to our freedoms in our communities and as citizens of this nation. Practically every major choice we're being asked to make these days comes down to a choice between democratic and authoritarian control of education.

**Q:** The theme seems a pretty broad one. How have you planned the program of the convention to examine it?

## the program in brief

**The Dates:** Sunday through Wednesday, January 25-28, 1959  
**The Place:** San Francisco, California: The San Francisco Civic Auditorium Center; NSBA Hotel Headquarters at the Sheraton-Palace Hotel  
**The Theme:** Improving Education — A Free People's Responsibility

### SUNDAY, JANUARY 25TH

Meetings of the Executive Secretaries of the 51 state and territorial school boards associations, of members of state boards of education and chief state school officers, and of school board members and superintendents from cities of more than 300,000 population. All three meetings are scheduled to begin at 9:00 a.m.

1:00 p.m. to 5:30 p.m. Registration.

Convention Exhibit may be visited without badges on Sunday afternoon and Monday morning only.

2:30 p.m. to 4:00 p.m. Vesper Services.

Music by combined choirs of San Francisco Bay Area high schools.

7:30 p.m. to 9:30 p.m. First Meeting of the NSBA Delegate Assembly.

(Reports from Treasurer and Executive Director; proposed

resolutions; proposed amendments to Constitution and By-Laws; report of Nominating Committee.)

### MONDAY, JANUARY 26TH

8:30 a.m. to 6:00 p.m. Registration & Sale of Banquet Tickets.

Convention Exhibit admission by badge only after 10:00 a.m.

10:00 a.m. to 12:00 N First General Session.

Opening Ceremonies

Band Concert: Combined bands of San Francisco Bay Area high schools

Address by NSBA President Carl B. Munck

Keynote Address: Adlai E. Stevenson, Libertyville, Illinois

2:00 p.m. to 3:30 p.m. Second General Session.

Session Topic: "How Business and Labor View Their Responsibilities for Public Education in America."

Address: "How Business and Industry Can Help to Improve Public Education."

Address: "How Organized Labor Can Help to Improve Public Education." James B. Carey President, International Union of Electrical, Radio and Machine Workers, AFL-CIO, Washington, D. C.

# A Look Ahead to the 1959 NSBA Convention

**MUNCK:** We are trying to bring into the convention spokesmen for many different major areas and segments of our economic and social life — so that we can hear their ideas, suggestions, and criticisms on public school decision, and perhaps get a better basis for deciding what would be best for education. We expect that each spokesman will take a positive approach, in telling us what he thinks the area or segment he represents can do to improve public education, what its own responsibilities to improved schools are.

**Q:** What areas of economic and social life specifically?

**MUNCK:** Political parties, labor, management, farmers, government, urban leaders, education, and so forth. For example, our keynote speaker will be Adlai E. Stevenson. President Charles B. Shuman of the American Farm Bureau Federation will speak on "School Improvement Problems in Rural Areas." Big city school problems will be ex-

amined. Business and industry as well as organized labor will be represented, and so on.

**Q:** Do you plan table discussion sessions for participants as you did last year in Miami Beach?

**MUNCK:** Yes, there will be an evening of such discussions, set up according to size of school district and similarity of problems. We've gone to some lengths this year to see to it that the table groups are made up of delegates with common situations, problems, and interests, so that the exchange of ideas and opinions will have a practical common base. We have also made provisions for a series of three large group sessions following major convention addresses — following these addresses at general sessions, the participants will be able to participate in one of eight large



**We need to realize the pressures that are upon us for centralization of controls**

**3:30 p.m. to 4:30 p.m. Eight Large Group Meetings to Examine and Discuss Topic of Second General Session Addresses.**

(Each group meeting will be presided over by a school board member as Chairman. Two consultant commentators in each group will present introductory analyses of the general topic, as well as the points raised by the speakers. Open audience discussion will follow.)

**4:30 p.m. to 6:00 p.m. Visits by Convention Participants to Exhibition of School Products and Services.**

**7:30 p.m. to 9:30 p.m. Ten Special Sectional Events.**

- (1) Second Meeting of Delegate Assembly. (Reports of committees; election of officers for 1959-60; new business.)
- (2) Meeting of Members of State Boards of Education.
- (3) Meeting of Board Members from Cities of More Than 300,000 Population.
- (4) Meeting of Board Members from Cities of 100,000 to 299,000.
- (5) Meeting of Board Members from Suburban Communities.
- (6) Meeting of Board Members from Communities of 25,000 to 99,000.
- (7) Meeting of Board Member from Communities of 5000 to 24,000.
- (8) Meeting of Board Members from County and Intermediate School Systems. Theme: "Relationships and Responsibilities in the Administration of Intermediate Units."
- (9) Clinic on School and School Board Legal Problems. (Arranged in co-operation with the National Organization on Legal Problems in Education.)
- (10) Session on "Adult Education About Education." (Arranged in co-operation with the Division of Adult Education Service of the National Education Association.)

**9:45 p.m. to 11:00 p.m. NSBA Officers' and Directors' Reception for Convention Participants and Guests.**



San Francisco and the familiar "Golden Gate" spans



## The school board member: "educational representative of his entire community..."

meetings, each with its chairman and two group commentators.

**Q: Commentators?**

**MUNCK:** We've asked 16 highly qualified and prominent lay and professional educational leaders to participate at each of these large group sessions, in commenting on and analyzing the points made at general sessions by main speakers. We think this will provide a solid basis for the audience participation which is scheduled to follow in each of the eight groups.

**Q: Mr. Munck, do you consider national convention attendance for a board member an essential and necessary part of his service, or perhaps more as a useful benefit which he ought to take advantage of if he has the chance?**

**MUNCK:** It's my opinion that if the board member is going to realize the extent of his responsibilities—I mean really understand their significance and breadth—then it should be an essential part of his service. National conventions, it seems to me, provide the kind of inspiration and information which a board member needs to discharge those responsibilities, and in a way and at a level which he is not likely to encounter elsewhere.

**Q: You consider it, then, an appropriate expenditure of school district funds to pay the expenses of board members to attend NSBA conventions?**

**MUNCK:** It's almost been universally agreed that it is a proper expenditure. I ought to add that the financial

expense is only a part of the cost—often the main expenditure must be figured in terms of the time it takes to attend.

**Q: Should the entire board attend a national convention?**

**MUNCK:** Well, the more members that attend, the better informed the board will be, and the more inspiration and information will they have, for doing an outstanding job in discharging their responsibilities. You know, you can never get in an oral or written report of a convention the inspiration which a board member needs in order to devote the time and enthusiasm necessary for superior performance.

**Q: Should the superintendent go along with the board to a convention?**

**MUNCK:** Personally, I found it of great value to have the superintendent along with me during the first four or five national meetings which I attended. His comments and my questions gave me a lot more information than I could have acquired otherwise.

**Q: How many do you expect to attend the 1959 Convention in San Francisco in January?**

**MUNCK:** I expect approximately 5000 will be there. You know, we've had about a 50 per cent increase in attendance with each succeeding year.

**Q: Mr. Munck, what do you see as the major challenges to the National School Boards Association in the future, or for the future?**

**MUNCK:** I think there are three

major challenges. In the first place, we need to achieve adequate communication of the best and most effective educational procedures among the school boards and school board members of America. The second challenge has to do with the educational program itself—we must somehow become more effective in urging and assisting school boards to assume their basic obligations in the areas of educational philosophy and goals, curriculum, and evaluation of our schools and the educational program. The third challenge is really the challenge of Soviet education, although we would be faced with it even without the sputniks and all that. The challenge is to get greater results and achievement from our school efforts and programs. Essential to doing so is improving the quality of teachers and teaching.

**Q: One last question, Mr. Munck, which can sort of summarize the interview. How do you see the role of the school board member? I mean what summary or basic statement would you make about that role?**

**MUNCK:** As I see the role of the school board member, he's the educational representative of his entire community. He tries to get as much information as he can, and as many points of view, in a process of objective decision making. His main effort is not directed toward argument for any particular course of action, but toward judicial determination of what is best after considering all sides and elements.

### TUESDAY, JANUARY 27TH

9:30 a.m. to 11: a.m. Third General Session.

Address: "Implications of the National Defense Education Act." Lawrence G. Derthick, U. S. Commissioner of Education.

Address: "School Improvement Problems in Rural Areas." Charles B. Shuman, President, American Farm Bureau Federation.

11:00 a.m. to 12:30 p.m. Eight Large Group Meetings on Third Session Topics.

1:00 p.m. to 6:00 p.m. Special Events and Sessions.

- (1) 1:00 p.m. to 6:00 p.m. Visits by Convention Participants to Exhibition of School Products and Services.
- (2) 2:00 p.m. to 5:30 p.m. Session on Topic: "Good Personnel Policies Improve Education." (Sponsored and planned by NEA-NSBA Joint Committee.)
- (3) 2:00 p.m. to 5:30 p.m. Clinic on School Architecture and Architectural Problems.
- (4) 2:00 p.m. to 5:30 p.m. Session on Topic: Modern Issues on American Public Education, James Russell, Educational Policies Commission, NEA.
- (5) 2:00 p.m. and 4:00 p.m. Showing of Excerpts from Course in "Introductory Chemistry" Produced by Encyclopaedia Britannica Films.

7:30 p.m. to 10:00 p.m. Annual Banquet, Garden Room of Sheraton-Palace Hotel.

### WEDNESDAY, JANUARY 28TH

9:30 a.m. to 10:30 a.m. Fourth General Session.

Session Topic: "Improved Education Through Improved Teaching."

Address: "The Professional Preparation of Public School Teachers." William G. Carr, Executive Secretary, National Education Association.

10:45 a.m. to 12:30 p.m. Fifth General Session.

Session Topics: "What Can Foreign Education Offer for American School Improvement?"

Address: "Education in the Soviet Union." Oliver J. Caldwell, Assistant Commissioner for International Education, U. S. Office of Education.

Address: "A Comparison Between Soviet and American Education, Byron S. Hollinshead, Former President, Coe College, Former Director, The Technical Department, UNESCO, Paris, France.

2:00 p.m. to 4:00 p.m. Sixth General Session.

Session Topic: "The Secondary School in the Improvement of American Public Education."

Address: "A Final Report of a Study of the American High School." James B. Conant, Chairman, Two Year Study of the American High School.

# Supervision of Pupil Disciplinary Action

STEPHEN F. ROACH

Editor, *Eastern School Law Review*, Jersey City, N. J.

The authority of a local board of education to formulate reasonable rules and regulations for the government of the district public schools is no longer questioned. What is frequently questioned, however, is whether the *actual enforcement* of a rule is reasonable or whether the school authorities are negligent in the manner in which the rule is administered. Particularly might these issues be raised in connection with rules relating to the disciplining of pupils because of misbehavior.

A significant case involving this aspect of school administration was decided recently in California.<sup>1</sup> While the school system involved was a private (parochial) one, the principles illustrated are of equal importance to public school boards.

### Facts of the Case

George Martin, 14 years of age, was a pupil at the Pius X High School, a private, parochial school in the Los Angeles area. One afternoon during the week preceding February 19, 1955, while in his home room along with his fellow pupils awaiting the dismissal bell, some of the boys (not George) in rushing toward the door broke a window of glass.

As punishment, the boys were told they were either to stay after school on weekdays and pull weeds at the school's football field, or to report to the football field the following Saturday (February 19) and pull weeds.

Although there was no evidence as to what time on Saturday they were to arrive at the field, one of the boys had been told to "take roll" there in order to record who appeared.

George arrived at the field about 9 a.m. While, at that time, no one was pulling weeds some 15 or 20 boys (pupils at the Pius X school) were getting ready to play football. All of the boys were about the

same size and all were wearing street clothes. George was chosen to play on one of the "sides."

While running with the ball, George—who had played football previously, but never contact football at the Pius X school—was "body-blocked," fell, and broke his left arm. The accident occurred about 15 minutes after the boys had begun playing. No supervisor or teacher was present while the boys were playing.

Thereupon, the father of George brought suit against the school authorities for personal injuries sustained by the boy and for recovery of the money expended for medical care. In the trial court the judge ordered the jury to return a verdict against the parent. This judgment was here being appealed.

### Issues of the Case

The fundamental issue, of course, was whether under the circumstances stated the school authorities had been negligent.

### BOARD'S ZONING RULES

In the absence of evidence of discrimination, the Children's Court of New York will not interfere with the board of education's zoning rules.

Justice Justine Wise Polier rendered this decision on October 3, when a Earl Price and his wife unsuccessfully sought to send their daughter Erika to Taft High School instead of to Theodore Roosevelt High School.

While the latter school is within the zone of their home in the Bronx, the Prices objected to it on the allegation that Roosevelt offered their daughter a substandard education.

Justice Polier said it is not within her scope to declare one school better than another. The court, she said, cannot evaluate courses in a particular school, nor assign students to a certain school.

While the judgment here rendered would apply specifically to the Pius X school authorities, the views of the court concerning the reasonableness of the disciplinary action described and the manner of its enforcement—both of which might well be applicable in other public and private schools—will be of considerable interest to school officials.

### Findings of the Court

The present court first noted that Martin was, in effect, asserting that the school authorities were negligent in that no supervisor or teacher was present on the football field when the boys were there. His argument thus "seems to be that if a supervisor or teacher had been present there would have been no football game and therefore George would not have been injured."

To this argument the court commented. (1) the Pope Pius school had no rule regarding the attendance of a supervisor on the playground during intermission or before or after school; (2) football was a normal play activity at the school; (3) if a supervisor or teacher had been present and had allowed the game to be played it could not be said that the manner of running with the ball or of blocking the players would have been different, since it had not appeared that the game was played in an abnormal manner; (4) no amount of precaution or supervision could avoid the injuries to which children are subject while participating in such games; (5) the law does not make school authorities "insurers of the safety" of pupils at play; and (6) George, in disobeying the direction that he go upon the grounds and pull weeds, was guilty of willful misconduct.

Pointing out that there was no evidence to indicate that the matter of pulling weeds involved a dangerous undertaking, the present court held that there had been no negligence on the part of the school authorities in placing the boys on their honor to perform such work without supervision.

Accordingly, the original court decision—in favor of the school authorities—was upheld.

### Significance of the Case

The following comments of the court illustrate the reasoning employed in arriving at this decision. Accordingly, they should be of interest and value to all board members and school administrators:

"In the present case there was no evidence that the [disciplinary measure assigned] involved a dangerous undertaking. Since the teacher told one of the boys to take the roll . . . it might reasonably be inferred that the teacher was placing the boys on their honor to [complete the disciplinary assignment] in the absence of the teacher and it was not intended that a teacher or supervisor should be present. In view of the apparently nondangerous work [involved in the disciplinary measure assigned] . . . it would not be negligence on the part of the defendant to place the boys on their honor to perform such work without supervision.

. . . Even if the teacher or supervisor intended to be present . . . if the boys arrived and began playing football prior to the time scheduled for the arrival of the teacher or supervisor, the absence of the teacher or supervisor prior to the scheduled time would not constitute negligence."

<sup>1</sup>George T. Martin et al. v. Roman Catholic Archbishop of Los Angeles; cited as 322 P. 2d 31 (Cal.) (1958) in the West National Reporter System.

# the AMERICAN SCHOOL BOARD JOURNAL

An Independent Periodical of School Administration  
William C. Bruce, Editor

## Guest Editorial —

### THE TEACHER-PUPIL RATIO

ONE of the favorite diversions of educational propaganda is to project figures into the future — 1965 or 1970 or the next century — and to paint a picture which shows how badly the educational situation is deteriorating and how calamitous it will be by the projected future date unless we spend more money — much more money on education.

#### National Statistics Oversimplify Problems

School board members are likely to be awed by these projections with all the statistical gobbledygook. Terribly impressive national figures are cited, and the inference seems to be that this is the local situation. School board members should be continually reminded that national statistics are an oversimplification of educational problems often for propaganda purposes, and they often hide more problems than they reveal. In fact, the problems that are discovered are not the actual problems.

Mr. Freeman in the notable study of "School Needs in the Decade Ahead" takes the figures and statements of the National Education Association and the U. S. Office of Education and others and comes up after careful analysis with surprisingly different results.

Take a simple case. The NEA says with italicized emphasis, comparing the situation in 1947-48 and 1956-57: "*The schools have steadily fallen behind in their efforts to match the increased enrollment with a commensurate increase in teaching staff.*" The statistics quoted indicate the enrollment increased 34.2 per cent and the teachers only 31.2 per cent. The ratio of teachers to pupils in 1947-48 was 1 to 26.8 and in 1956-57 was 1 to 27.4. But an examination of these statistics and the accompanying notes indicate that the first statistics included principals and supervisors in the 1947-48 tabulations and these were excluded from the 1956-57 statistics. "Other instructional staff" was included in the earlier statistics and omitted in the later ones. Obviously one of the elementary principles of statistics is violated in failing to compare like things. Note corrected figures:

Enrollment	Instructional Staff	Ratio
1947-48 24,101,300	897,972	1:26.8
1956-57 32,268,359	1,276,154	
Increase in % 33.9%	42.1%	1:25.3

Obviously teaching staff in this period increased at a faster rate than enrollment, and the number of students to teachers decreased.

#### The Teacher-Pupil Ratio and Smaller Classes

But what the high school student of today might call "intriguing" is this whole problem of the teacher-pupil ratio. It seems almost universally accepted by superintendents of schools and school board members that a reduction of the teacher-pupil ratio is a sign of efficient administration, and yet the basis of this belief that smaller classes below a maximum are better educationally than classes a little larger is not borne out by the research studies by the

educationists. This we shall discuss another time. Here, we should like to concentrate on the teacher-pupil ratio itself.

Let us begin with the facts of our educational history during the first half of the twentieth century. In the years between 1899-1900 and 1955-56, the enrollment increased from 15,503,000 to 31,145,000; the instructional staff rose from 435,000 to 1,217,000, and the teacher-pupil ratio declined from 1 to 35.6 to 1 to 25.6. Let us note certain facts regarding these statistics.

1. Obviously the supply of teachers increased at a substantially greater rate than the enrollment of pupils.

2. If the teacher-pupil ratio of 1900 had been maintained — in no sense greatly excessive — the 1956-57 enrollment could have been taught by 442,422 teachers less than the actual number of 1,217,000 teachers reported in 1955-56.

3. The cost of this reduction of the teacher-pupil ratio at a salary of \$3,600 a year was \$1,592,719,200.

The important thing to note in connection with this general discussion is that the publicized shortage of teachers is due not primarily to the failure of the supply as to the change in teacher-pupil ratio. School board members should be insistent whenever change in teacher-pupil ratio is proposed to request answers to the questions: What educational gains may be expected? And on what grounds? And how much will it cost?

The importance of the teacher-pupil ratio in school administration, and in the public discussion of the teacher shortage and supply can be shown in stating how different ratios may be figured for 1970. The estimated enrollment for 1970 will be 43,000,000 pupils, and the effect of the ratios would be as follows:

Teacher-Pupil Ratio	Teachers Required	Increase For Each Ratio	Cumulative Increase
1:30	1,433,000	.....	.....
1:29	1,483,000	50,000	.....
1:28	1,536,000	53,000	103,000
1:27	1,593,000	57,000	160,000
1:26	1,654,000	61,000	221,000
1:25	1,720,000	66,000	287,000
1:24	1,792,000	72,000	359,000
1:23	1,870,000	78,000	437,000
1:22	1,955,000	85,000	522,000

Here is revealed the significance of the teacher-pupil ratio for budgeting, for school administration, and incidentally for school construction. These student ratios all represent good conditions for classroom instruction, yet the difference in the number of teachers between the ratio of 30 and 22 pupils to a teacher is more than a half million teachers and the cost more than a billion dollars — almost two billion.

We have used throughout here the simplest teacher-pupil ratio based on the total enrollment and the total number of teachers. These figures will be affected to produce a lower ratio if we include, with the teachers, the supervisors and/or the other instructional personnel. But an even more practical method to determine the teacher-pupil ratio is to use as the enrollment figure, not the "total enrollment," but the "average daily attendance" which is ordinarily figured at 88 per cent of the total enrollment. The Inquiry into the Cost and Character of Education in New York State (Regents of the University of the State of New York, 1938, Gulick and Capen) related the instructional staff to the average daily attendance.

Paul Woodring and others have noted that in educational discussions "jargons and slogans come to replace original thought, and the slogans become corrupted in their meaning." The teacher-pupil ratio is such a slogan, and school board members and should be on their guard.

— Edward A. Fitzpatrick





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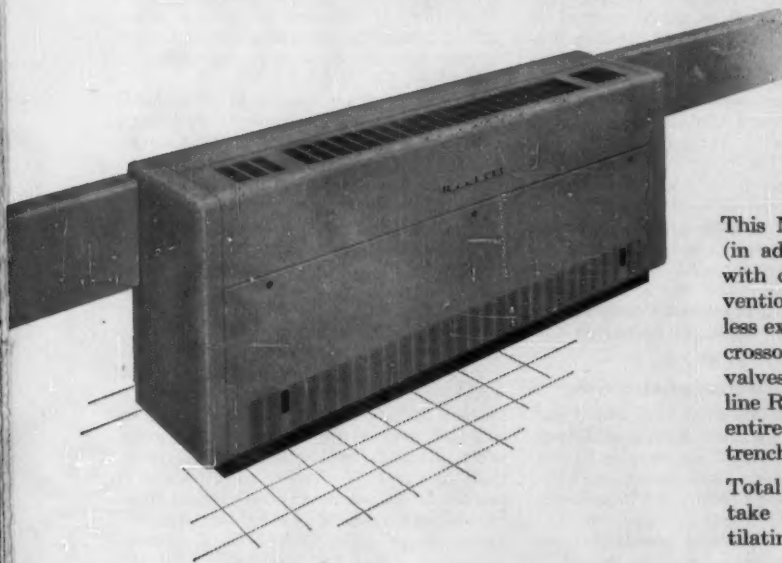
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# Improving Economics Learning in the Schools

ELAINE EXTON

While the orbiting of man-made satellites has captured headlines dramatizing the need for improved instruction in science, math, and foreign languages, a drive to strengthen the teaching of economics in American schools has been making quiet headway on another vital curriculum front.

Recognizing that the Soviet challenge to our democratic way of life extends past intellectual and scientific rivalry to include aims of economic conquest, an increasing number of our national leaders are stressing that American youth should know the skills and understandings requisite to economic citizenship.

Commenting that it is not strange the launching of Sputnik should have caused a great upsurge of interest in the training of college and secondary school students in natural science, Edwin G. Nourse, a former chairman of the President's Council of Economic Advisers warns: "But the race between economic authoritarianism and free enterprise under free government poses a challenge for our educational system that is just as sharp."

### A Neglected Curriculum Area

Yet the instruction which many schools are giving in "economics" is generally far too meager. That insufficient attention has been paid to economics education in many school curriculums is confirmed by surveys of the U. S. Office of Education and of Brookings Institution which have found "less than five per cent of all high school students take the equivalent of a semester course in economics."

A widespread lack of knowledge about the basic facts of our economy—its nature, problems, and potentialities—has been reported by such spokesmen as Howard M. Cool, educational director of the National Better Business Bureau who states: "We get over a million inquiries and complaints a year from people who are abysmally ignorant of even basic economic

principles. We feel anything that will help stamp out this ignorance will be a great contribution to democracy."

### Importance of Economic Citizenship

That economics constitutes the warp and woof of the fabric of our modern society and is the foundation on which our political and social structure rests has been underlined by educational leaders like Galen Jones, the director of the Council for the Advancement of Secondary Education, who considers a practical grounding in economics an imperative for the responsible citizenship essential to safeguarding America's economic and social system and preserving our political and economic liberty.

Noting that the wheels of our economic machinery are continually turning, impinging on our lives at every moment he cites the complexity of our modern economic system as another factor which makes exacting demands in information and understanding on every citizen.

As G. Derwood Baker, professor of education at New York University, succinctly said: "The great majority of current political issues hinge on questions of finance and economic policy; and in his role as consumer, worker, farmer, professional, or businessman each individual is called upon to make decisions which influence and shape the character of our political, social, and economic institutions. Votes are being cast at the ballot box and cash register."

### Appreciating American Capitalism

Enhancing the ability of high school students in thinking appreciatively and constructively about their economy is an objective of *American Capitalism: An Introduction for Young Citizens*. By introducing them to some of the basic tools of economic analysis, it seeks to enable them to cope more effectively with the economic life around them.

The first in a series of teaching-learning units to be issued by the Council for Advancement of Secondary Education (1201—16th Street, N.W., Washington 6, D. C.) *American Capitalism* reviews the role of students as voters, consumers, producers, and young adults and describes the unique features of America's economic system of free enterprise and how it functions. (An examination copy is sent free to school systems on request. Single copies are priced at 50 cents each, quantity orders at 40 cents each).

The person "who understands our economy, who develops useful standards for its appraisal, and who then shares actively with his fellow men in making it better serve our democratic ideals—he is the true patriot" according to this study unit, which describes the foundations of free enterprise—private property, profit motivation, competition, and economic freedom—and their relations to the other freedoms which are hallmarks of American democracy.

Prepared by Laurence E. Leamer, Professor of Economics at Harpur College of the State University of New York, and Dorothy Lampen Thomson, Associate Professor of Economics at Hunter College, *American Capitalism* was tried out in 191 high school classrooms in 44 states and then revised in the light of these experiences prior to being published in March, 1958.

### Teacher Education Programs

Another nonprofit, educational organization also concerned with raising the level of economic understanding in the nation celebrated its tenth anniversary on November 19 with a special conference held in Washington on *Education for the Economic Challenges of Tomorrow*.

The Joint Council on Economic Education traces its origin to interest sparked at a workshop in economic education sponsored by the Committee on Economic Development and New York University in 1948 so perhaps it is not surprising that a major feature of its activities has been the promotion of summer workshops where school administrators and teachers can fill in the gaps in their own knowledge of economics.

Some 1500 school people in all attended the 40 Economic Education Workshops held on college campuses in 1958 under Joint Council cosponsorship. Scholarships covering room and board are generally made available for these two-to-three weeks sessions, but educators seeking academic credit must pay usual tuition charges. All told some 265 such conferences involving 16,547 participants have been carried on since the initiation of the program.


Fostering in-service training activities, including seminars, lectures, and institutes during the school year to follow up on workshop experiences, and encouraging teacher training institutions to offer more effective courses in economics are some other Joint Council concerns. The locations of the 1959 summer workshops and further details on its various services may be obtained from M. L. Frankel, the director of the Joint Council on Economic Education, 2 West 46 Street, New York 36, N. Y. ■



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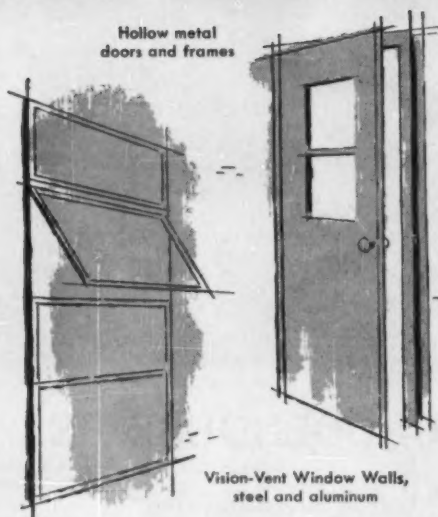
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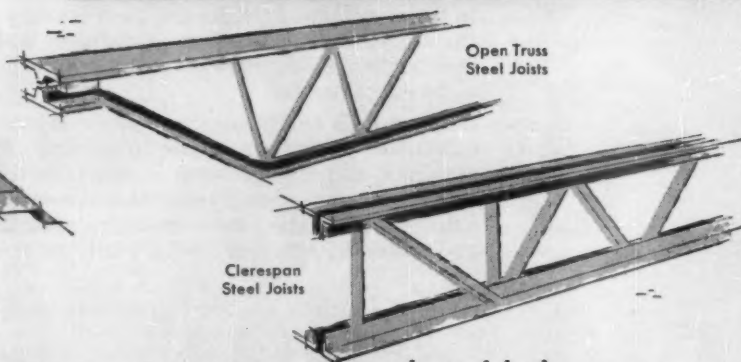
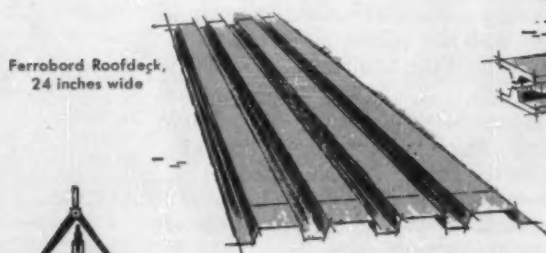
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Otter Creek Elementary School, North Terre Haute, Ind. Yeager Architects, Inc., Architects. Glen W. North Construction Co., Contractor.



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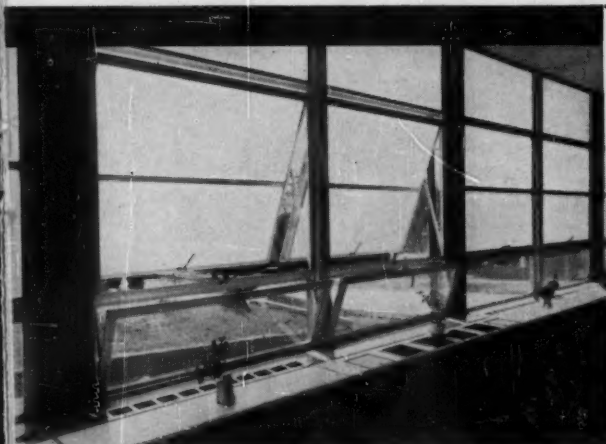
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## NEW BOOKS

### Legal Aspects of School Board Operation

By Robert R. Hamilton and E. Edmund Reutter, Jr. Cloth, 199 pp., \$4.95. Bureau of Publications, Teachers College, Columbia University, New York, N. Y.

Of recent books on school law, the present book appeals to us as the most realistic and useful. It is intended to help school board members—some 200,000 who comprise the 50,000 boards of education responsible for public education in the rural and city school districts of the United States—to do their work with legal effectiveness.

The book is fairly comprehensive and includes all of the ordinary legal aspects of the organization and administration of local school districts. Chapter I describes the local school board in the legal structure of the states, and chapter II takes up the authority of boards of education in relation to pupil personnel. Several good chapters discuss in order the authority of school boards in relation to the curriculum; the employment, retirement, and dismissal of teachers and other personnel. In this last-mentioned area, it is interesting to note, the authors must rely on very old decisions because these laid down the fundamental principles and the widely accepted rules of procedure. It is also interesting that the legal problems relating to salaries, dismissal of teachers, and collective bargaining are quite recent and offer many areas still to be determined by the courts.

Chapter V takes up the authority of school boards in connection with the acquisition, management, and sale of school property. The

special uses of school buildings by outside organizations is made clear but this matter must be checked by school boards against the statutes and rulings in their respective states. Special space is devoted in chapter VI to the management of school funds, with especial emphasis on areas that are still in dispute. This particularly applies to data on transportation, insurance, and minor uses that are still disputed in the light of some statutes.

A chapter on the contractual authority of school boards is particularly strong and makes clear some teacher contractual problems that are almost never insisted upon by school boards in spite of the statutes.

Perhaps the most important two chapters of the book are devoted to the authority of school boards as exercised in board meetings and in established board procedures. The legal rights of board members are exceedingly limited if exerted by individuals; they are broader than most professional schoolmen and their organizations are willing to openly admit when used in official meetings. In this connection, the authors express themselves very clearly concerning the need for and the usefulness of board committees, especially in large cities. The final chapter is devoted to the liability of school districts and individual board members for contracts, torts, and failure to obey express statutes.

The authors are inclined to present their own philosophy on education at the beginning of the various chapters and perhaps to slant the thinking of readers somewhat in line with current professional thinking and propaganda. The book as a whole makes thoroughly clear the legal basis of the organization and administration of schools by boards of education. This in many respects is quite different from the point of view of many professional speakers and writers. The book is a must for school board offices.

### The Pursuit of Excellence Education and Future of America

By the Panel on Education. Paper, 49 pp., 75 cents. Doubleday & Co., Garden City, N. Y.

This report of the Rockefeller Brothers Fund argues for the development and utilization of human talents in all areas of human life as the means of solving present problems of our society and of our national political existence. The statement considers the individual, his dignity and importance, as the central point in the improvement of our democracy. We must cultivate the idea of excellence, of the full use of human resources with full retention of the moral values of equality. The educational system must effectively overcome the influences in social environment which blunt personal and community aspirations. Our kind of society calls for the maximum development of individual potentialities at all levels. While there is much need for improving science education, a fact which recent international developments have proved, there is equal need for identifying talent in all its diversities so that education may develop programs for every field of human effort and at all levels of individual ability.

The report argues for greatly increased support of schools and colleges. Federal support is needed in the opinion of the panel, but it should be addressed to the needs of the highest priority and should not interfere with local and state support. It should, in fact, encourage greater local support. Scholarships, as a means of helping individuals to achieve excellence, and aid in developing local school plant facilities are recommended as offering the least dangers to our established methods of school support.

### Identification and Education of Academically Talented Student

By James B. Conant. Paper, 160 pp., \$1.50. National Education Association, 1201 Sixteenth St., N.W., Washington 6, D. C.

Contains the proceedings of a Conference on Identification and Education of talented high school students. It includes suggestions for identification, for developing community acceptance of programs for the talented, means for motivating the talented, providing for the talented, guiding of education, articulation, and preparation of teachers.

The publication, "Academic Achievement of Gifted High School Students," by Leslie J. Nason, listed on page 62 of the October issue of your JOURNAL as a publication of the University of California Press, should be credited to the University of Southern California Press, University Park, Los Angeles 7, Calif.

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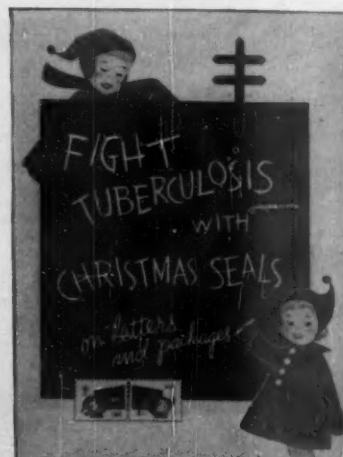
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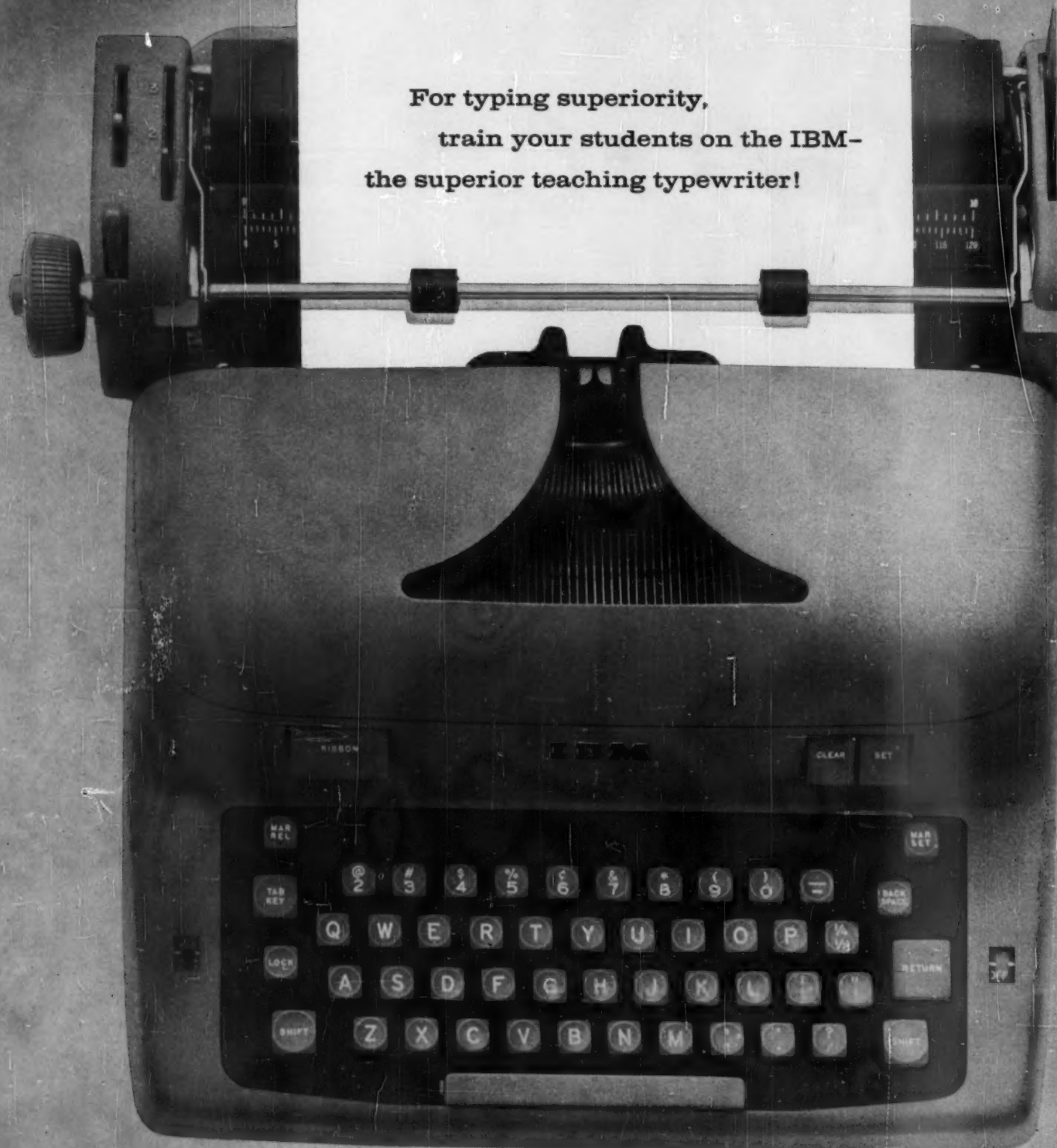
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## INDIVIDUALIZATION

(Concluded from page 18)

areas as in reading and arithmetic, but it is felt that proficiency in the tool subjects such as reading and arithmetic will manifest itself in improvement in all other areas of the curriculum, particularly in social studies and science. It is hoped also that children will learn a fair share of the subject matter presentation in science and social studies by listening and observing during class discussions. It is prudent and desirable in planning an individualized instructional program to compromise or adopt a com-

posite plan in order to avoid such criticisms, rather than make no attempt at all.

Criticisms may be heard from the proponents of enrichment within the regular classroom. It is agreed that enrichment is the best means for individualizing the instructional program to meet the needs of all children, and where such a program is effectively operated it is fulfilling its obligation. The question is just how much enrichment is being done in most classrooms. The middle grades are responsible for the presentation of all content subjects; and crowded classrooms are real deterring factors. Another deterrent is the limited

availability of funds with which to purchase necessary materials. Without materials it is almost an impossibility to plan any type of individualized program, particularly with the gifted. In any event, some enrichment is necessary in varying degrees in every type of program which may be devised and under all circumstances.

In the seventh and eighth grades of our two intermediate schools, boys and girls who are reading at least two years above grade level (Stanford Achievement) and possessing an I.Q. of 130 and above (Otis Quick Scoring) are screened for grouping in all subjects. Further screening is made by careful analysis of data in the cumulative folder containing test scores and judgments of teachers in the previous six grades. A final step is the administration by our school psychometrist of an individual Binet to all students who have been thus screened. All but one student in the first graduating class have entered the honors section of the high school, an extension of the advanced class of the intermediate grades. Seventh- and eighth-grade students of average or above average mental ability who are a year or more retarded in reading are also grouped in the seventh and eighth grades. These students are given special help in reading and special supplementary materials are provided.



Blooming Prairie Jr.-Sr. High School, Blooming Prairie, Minn.  
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### Needed: More Individualization

The fact that grouping of some type is utilized in no way eliminates the necessity for an enrichment type of individualized instruction. No matter how carefully groups are organized or on what criteria such groups are determined, children will vary widely in many ways. As soon as a group is homogeneously organized on the basis of mental ability we discover the pupils contained therein vary in dozens of other ways. The only thing alike about people is the fact they are all different. This is not only a truism; it is most desirable and necessary. In fact, noticeable variance among pupils increases in schools which provide individualized instruction. It makes teaching the interesting profession that it is and it provides our interdependent world with the diversity of talent it requires to exist. The teaching profession has universally recognized the diversity of abilities, interests, talents, and other characteristics among students. When it *universally accepts and practices* the concept of individualized instruction and differentiated assignments commensurate with the abilities of the individual students to perform, it will have reached another milestone toward realization of its ideal in providing equal educational opportunities for all students. ■



# News of Products for the Schools

## COLORFUL TEACHER DESK

Double pedestal styling and a 30 by 60-in. top are features of a new teacher's desk by Griggs Equipment, Inc., Belton, Tex. Tempo



### Has Matching Chairs

Teachers Desk No. 996 has six large drawers, self-leveling tapered legs, and an all-welded steel frame. It may be ordered with a plastic top or hardwood top with plastic surface. Baked enamel finishes come in several colors: beige, gray, green, coral, or blue. Companion chairs are available in three styles to match the colors of the desk.

(For Further Details Circle Index Code 0178)

## BLACKBOARDS CLEANED ELECTRICALLY

The Chalkmaster is a new electrical cleaning device for chalkboards designed by Weber Costello, Chicago Heights, Ill. The easily portable cleaner has a special suction head which both erases and removes excess dust from chalkboards. The machine also cleans erasers



### An End to Chalk Dust

by drawing up dust into a disposal bag. Because the erasers are cleaned by suction, chalk dust is not thrown into the air. The cleaner also picks up chalk dust from the chalk trough. One cleaning head does all the work, eliminating additional accessories.

(For Further Details Circle Index Code 0179)

## TRANSISTOR ETV IS ON THE WAY

A fully transistorized, portable color television system has been developed experimentally by the Radio Corporation of America, New York 20, N. Y. It uses such little power that it can be operated from automobile storage batteries or a fixed power sup-

ply. The system, contained in two compact units, weighs only 65 lb. and uses 75 watts' less power than the sealed-beam headlights of an automobile. Designed for closed-circuit use, it includes a 20-lb. camera and a 45-lb. monitor unit about the size of a suitcase. The equipment uses 300 transistors, including several still in the developmental stage. The new color television is not yet on the market since a number of components are still not commercially available.

(For Further Details Circle Index Code 0180)

## NEW DESIGN IN PORTABLE TYPEWRITERS

A portable typewriter which incorporates many features of the standard office machines has been announced by Royal McBee Corp., Port Chester, N. Y. The Futura portable introduces Royal's Magic Column Set which permits complete tabulation from the keyboard. The 44-character keyboard has the same slope and finger-curved keys as the



### Office Style Portable

office typewriter. Other features of the machine include a 10-second "white-glove" ribbon change, automatic margins, and a line meter to indicate distance from bottom of page. The typewriter is available in four color combinations, gray with green, brown, blue, or mist gray. The portable comes in a scuff-proof case of simulated cowhide with matching luggage tag. Two polystyrene safety cushions hold the machine firm in its case and act as shock-absorbing cushions. A transparent dust bag is included with the machine and case.

(For Further Details Circle Index Code 0181)

## WATER COOLER FOR SPORTS EVENTS

How does your school supply water to players during athletic games? Old-fashioned methods included chewing on wet towels, bucket and dipper, and paper cups, but studies show such methods are either unsanitary or take too much service time. The Behrens Sanitary "Water Bubbler" is a portable water fountain used by many professional teams. The unit is a five-gallon, stainless-steel tank, mounted on rubber-tired wheels for easy rolling. It has two sanitary push-button fountains that deliver cool water under constant pressure. The unit is easy to fill, ice, and clean. Manufactured by Behrens Mfg. Co., Waukesha 4, Wis.

(For Further Details Circle Index Code 0182)

## FLEXIBLE PLASTIC IN CHAIR-DESK

American Seating Co., Grand Rapids 2, Mich., has used a new material, Amerflex, in the seat and back of the new Classmate desk. According to the manufacturer, Amerflex is as indestructible as iron, yet as supple as rubber. The flexible plastic conforms to body



### Comfortable Studying

when sat upon, and returns to its original shape when not in use. It eliminates refinishing costs as it is colored all the way through. Easily cleaned with soap and water, it will not mar, splinter, dent, crack, flake, or stain. The chair-desk unit features: a self-adjusting chair back, an adjustable plastic top, and a steel bookrack. Desk colors are coral and parchment.

(For Further Details Circle Index Code 0183)

## PORTABLE DISPOSAL UNITS

Disposal units which can be used for continuous 8-hr. per day burning are made by Joseph Goder Incinerators, Chicago 4, Ill. A foot pedal opens and closes the waist-high door, freeing the operator's hands for handling of the waste drum. The refuse moves downward on a series of inclined step grates in direct proportion to the combustion process. This system provides sufficient oxygen for an all-consuming fire; prevents ash build-up under fuel bed; reduces smoke odor and heat loss; and saves on fuel costs. A drawer-type ash pan allows easy removal of ashes. A secondary combustion chamber operates on the same principle as the first chamber and insures complete destruction of all remaining residue. The Disposal is available in three models which will burn 50, 75, or 100 lbs. of refuse. Additional accessories include a gas burner with automatic flame control, timer, and induced draft fan.

(For Further Details Circle Index Code 0184)

## UPHOLSTERED FOLDING CHAIR

An upholstered back and padded seat are the outstanding features of the Royal 400, a folding chair offered by Royal Metal Mfg. Co., New York, N. Y. A chrome plated frame and luxurious upholstery add beauty to utility. Write to the manufacturer for more details.

(For Further Details Circle Index Code 0185)

(Continued on page 60)

CORRESPONDING CODE INDEX NUMBERS TO BE ENCIRCLED CAN BE FOUND ON THE CARDS IN THE READER'S SERVICE SECTION



## LEARNING AT

**Your once-a-year refresher course in the tools of education**

**Y**ear after year, school administrators tell us they look on the AASA meeting in Atlantic City as a refresher course in the tools of education — equipment, materials and supplies. They tell us they like the opportunity to learn the facts directly from men who know them best, the people who make the products and spend their lives with them.

They tell us they like the opportunity to shop and compare — to ask the same

questions of several competing manufacturers. They like to get into technical discussions of the fine points that make for good value or poor value in a long-term investment of school funds.

In short, they like the exhibits because they like to learn — and they find that here they can learn more about equipment, materials and supplies in a shorter period of time than they can in any other way.



Is floor maintenance an expensive problem in your school? How do you lick it? How much should it cost? These schoolmen are finding the facts, even trying their own hand with new equipment. Result: better informed schoolmen and better value for their schools.

Two school administrators learn about the fine points of furniture design direct from the factory representative. Result: better informed schoolmen and better value for their schools.

## ATLANTIC CITY

Come to Atlantic City in February (14-18) — and plan to spend some time at the exhibits. They're there to help you be a better school administrator.

**HERE'S A TIP:** It's humanly impossible to cover all the exhibits thoroughly in the limited time you'll have. In January or February, this magazine will be carrying a special news feature, provided by AASA, showing you important new items that will be on display. Study this — aid your convention program — carefully and pick your spots. Select the products that are your biggest problems at the time and try to see each manufacturer. They'll be happy to answer any questions you may have. Your schools will benefit.

This message prepared in the interests of better education by  
**AMERICAN ASSOCIATION OF SCHOOL ADMINISTRATORS**  
 and  
**ASSOCIATED EXHIBITORS** of National Education Association

SCHOOL BOARD JOURNAL for DECEMBER, 1958

(For more information from advertisers, use the postcard on page 63)



## News of Products . . .

(Continued from page 57)

### COMMERCIAL SUCTION CLEANER

A suction-blower floor cleaner for commercial use has been announced by Ace-Sycamore, Inc., Sycamore, Ill. The mobile cleaner features a swivel top and disposable dust bag with an extra-large capacity. Called



Mobile Vacuum

Model 201, it is powered by a  $\frac{3}{4}$ -h.p. motor that creates great suction, yet remains relatively noiseless. The cleaner adapts to many uses in and around the school, and with the 8-piece set of cleaning attachments (ordered extra) the versatility of the machine is increased. Other models produced by the company are described in a brochure available from the manufacturer.

(For Further Details Circle Index Code 0186)

### EMERGENCY OXYGEN KIT

A portable kit that furnishes emergency oxygen is made by Emergox, Inc., Nashville, Tenn. Recommended for school health offices, for use in emergency vehicles and doctor's cars, Emergox equipment can be operated even by an inexperienced layman. When the face mask is put in place and the knob is given a quarter turn, oxygen flows at a controlled rate without further adjustment.



Safe for Layman's Use

Emergox Model S-32 complete with mask and carrying case, contains 20 minutes supply of oxygen; it measures 12 in. long and weighs only 2½ lbs. A larger Twin Model S-23 furnishes 60 minutes of oxygen, weighs 7½ lbs. Oxygen cylinders are refillable. Completely dependable and safe, the unit may be bumped, banged, dropped, overheated, or even exposed to direct flame, according to the manufac-

turer. First-aid oxygen treatment is recommended for medical emergencies, body injury, electrical shock, and noxious gases.

(For Further Details Circle Index Code 0187)

### GYMNASIUM HEATING UNIT

Recommended for heating storerooms, gymnasiums, and other public locations requiring heat only occasionally is the new model K-25-F gas-fired unit heater by John J. Nesbitt, Inc., Philadelphia. This particular model is also recommended as standby heating to supplement a central system. Ten models are available in this Series K in ranges: from 25,000 to 250,000 Btu per hour input, from 66 to 310 lb. in weight, and from 18 to 36 in. in height. Installed at ceiling level, the self-contained heating units can be easily installed in an older building without structural changes. Send for more details.

(For Further Details Circle Index Code 0188)

### CHILD'S ARMCHAIR

A new design in all steel, nonfolding chairs for children is the Little Captain's Armchair being offered by Durham Mfg. Corp., Muncie, Ind. The chair is available in three styles: a 13-in. seat height with cemented leatherette



Youthful Captain's Chair

seat, No. 280; a 13-in. seat height with padded, vinyl upholstered seat, No. 281; and an intermediate 15-in. seat height with cemented leatherette seat, No. 285. The flared legs of the chairs offer a solid base and have a steel stretcher welded to the front legs for harder use and longer wear. All models have contoured ladder backs for posture-correct comfort. Further information may be obtained from the company.

(For Further Details Circle Index Code 0189)

### PUMP CONTROL FOR RURAL SCHOOLS

A pump-control system designed specifically for schools by the Automatic Control Co., St. Paul, Minn., is especially useful in rural areas. It is a hydraulic installation which enables the school to obtain its water supply by large-city engineering methods. The compact new system replaces both the old and unsightly elevated tank and the ordinary rural pressure systems. Called Plan Pak Pump Control, it includes motor starters and circuit breakers, all compactly mounted and wired for convenient installation. The control operates by combination level-pressure measurement and controls both the pump and compressor.

(For Further Details Circle Index Code 0190)

### MODULAR OFFICE FURNITURE

A matched line of all-steel office furniture, introduced by Remington Rand Division of Sperry Rand Corp., New York 10, N. Y., is designed for L- or U-shaped groupings. The modular style of the furniture offers an un-



Color for Steel Work Units

limited arrangement of work units. The group has a credenza unit with sliding door or an open shelf that adjusts to four positions. Extra shelves are available. The new group also includes single or double pedestal desk; tables in many sizes; file and storage cabinets with or without doors and locks. Extra table tops of linoleum or Textolite are available 19¼ in. wide in a number of lengths from 16½ to 97 in. The new furniture comes in decorator colors gray-rite, gray-mist, beige, or surf green with harmonizing desk and table tops.

(For Further Details Circle Index Code 0191)

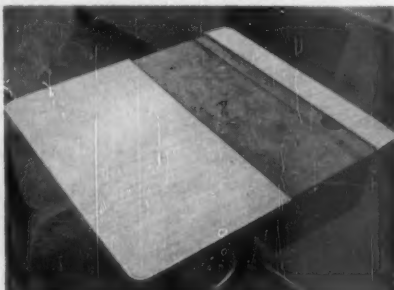
### LARGE LIQUID-SOAP DISPENSER

Bobrick Dispensers, Inc., of Brooklyn and Los Angeles, presents a new 16-oz.-capacity liquid-soap dispenser. Model 181 has a translucent and unbreakable globe of rigid polyethylene. Liquid soap will not crack, distort, or discolor the plastic. The solid one-piece body of the dispenser is triple plated with a high polished chrome finish. A push-up dispenser valve delivers a measured amount of soap and is tamperproof, according to the manufacturer. The unit is easy to fill with soap and automatically locks into place.

(For Further Details Circle Index Code 0192)

### COVERS DAMAGED DESK TOPS

A slide-on laminated plastic top is a sensible answer to the problem of what to do with carved, scratched and defaced desk tops. Made



Slide-on-Plastic Top

by Coverite, Inc., Ypsilanti, Mich., the sturdy slide-on top is of Lamidall, a durable, doodle-resistant, laminated plastic. It is bonded to

(Concluded on page 62)

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## LIGHT CONTROL by DRAPER



### CREAM WHITE DRATEX SHADES

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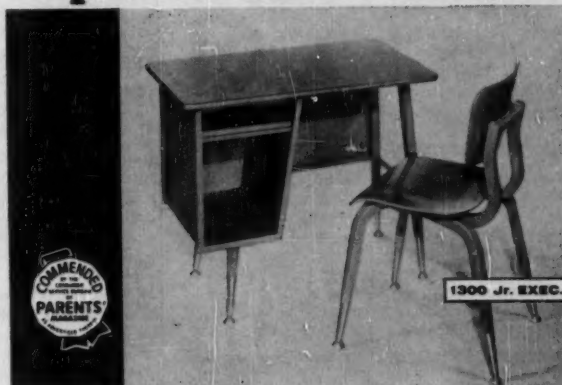
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MILWAUKEE 5, WISCONSIN

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by american desk



A complete line of school furniture in future tense! You'll notice a marked improvement in working conditions with a unit like the "Jr. Exec" shown with Series 500 Chair. A counterpart of adult working facilities, it's generous with work space—economical with space requirements! A rugged, well-balanced unit... easily adapted to changing class needs. Permits grouping, side-by-side or staggered seating arrangements.

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american desk manufacturing co.  temple, texas

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19 South Hoyne Avenue, Chicago 12, Illinois

**AERVOID** Vacuum Insulated  
Hot or Cold Food, Soup, Milk,  
Coffee and Beverage Carrier-Dispensers

## News of Products . . .

(Concluded from page 60)

¼ in. tempered hardboard and bound with a heavy extruded aluminum edging. Coverite Tops are made for almost all sizes of regular shaped desks. The tops for the universal Type A desk are packed ten to a package and shipped f.o.b. Jackson, Mich. According to the maker, a room full of tops can be installed in an hour by the school custodian. Write for prices.

(For Further Details Circle Index Code 0193)

## CANOPIES AND WALKCOVERS

Plastic Fiberglass panels combined with pre-fabricated aluminum extrusions comprise the new canopies and walkway covers manufactured by Stelzer Molding Co., South Bend 28, Ind. The canopies, using the trade name Markay, are engineered to meet extreme snow conditions of 30 lb. per square foot. The coverings can be drained at outside or building face, necessary draining hardware is included



Tailor-Made in Color

with the canopies. They provide shelter and protection from direct sunlight through a limited transmission and filtering of sunlight. The canopies and walkcovers can be supported from the ground, suspended by tension rods, or attached to cantilever construction. The neat appearing shelters are tailor made and available in whatever choice of color and light transmission is desired. Write to the manufacturer for more details.

(For Further Details Circle Index Code 0194)

## MULTIPURPOSE TABLE-BENCH

Well suited for use in multipurpose rooms is this 6-ft. cafeteria table-bench that converts in seconds into a bench with backrest, providing immediate auditorium seating. The Howmatic "C" table bench is made by Howe



Converts in Seconds

Folding Furniture Inc., New York City. Providing seating space for four or five, the bench has an angled backrest that assures

good posture and seating comfort. Formica table top measures 15 by 72 in.; Masonite bench is 12 by 72 in. Frame of one-inch steel tubing has a rustproof cadmium finish. Unit comes in two table heights, 29 or 27 in. Optional accessories are a kneeler that slides away when not in use and locking casters for easy portability. When folded for storage, unit measures 72 by 19 in.

(For Further Details Circle Index Code 0195)

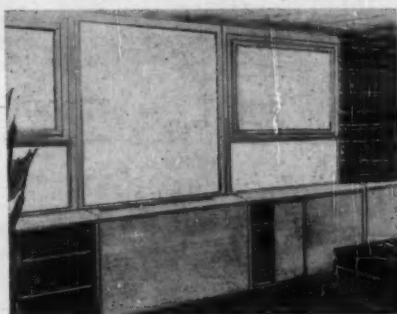
## FIREPROOF A-V CURTAINS

Cordoglas is an attractive, lightweight, completely opaque curtain material recommended for audio-visual use. Developed by Cordo Chemical Corp., Norwalk, Conn., the vinyl-coated glass fabric has been tested and approved as fire protective. The fabric can be washed, scrubbed, and mended, and will not stretch, stain, shrink, or fade. Easily installed, the curtains do not require any lining. The firm also makes a line of fire-safe fabrics for school auditoriums and window draperies in a wide range of colors and finishes.

(For Further Details Circle Index Code 0196)

## AIR CONDITIONING IN CURTAIN WALLS

The new Lupton curtain walls have air-conditioning units "built in" as an integral part of the curtain-wall panels. The panels are installed exactly like conventional curtain walls and need only an electrical connection to operate the air-conditioning unit. The



All-in-One Unit

manufacturers, Michael Flynn Mfg. Co., Philadelphia, state the units are easy to install, save space, and are architecturally attractive. Each unit has separate temperature controls. The wall unit also removes smoke and odors through its exhaust. Recommended especially for office use, units come in two models: heavy-duty conditioner for areas where several people are located, and a lighter unit for areas where they are only one or two occupants. The two sizes of conditioners are interchangeable. Send for more details.

(For Further Details Circle Index Code 0197)

## MANUFACTURERS' NEWS

The C. Howard Hunt Pen Co., has opened its new production plant at Statesville, N. C. The company's executive offices remain in Camden, N. J., where the plant was previously located. The C. Howard Hunt Pen Co. manufactures Boston pencil sharpeners and other quality art products.

Shipment of the one millionth electric typewriter manufactured by the Electric Typewriter Division of International Business Machines Corp., has been announced. The division recently marked its silver anniversary with the introduction of an electronic typing calculator called IBM, No. 632.

## CATALOGS AND BOOKLETS

Coin sorting and counting machines are described in a new catalog sheet from Klogg Engineering, Inc., Livonia, Mich. Use of coin-handling equipment assures accuracy and saves time in handling receipts from school lunch and other school activities.

(For Further Details Circle Index Code 0198)

Electric-Hydraulic Folding Partitions manufactured by the Robert Hawa Co., Detroit 39, Mich., are described and illustrated in a new catalog now available from the manufacturer.

(For Further Details Circle Index Code 0199)

The Maple Flooring Manufacturing Association, Chicago 1, Ill., offers a check list on quality of flooring material, including important tips for the installation and maintenance of hardwood flooring.

(For Further Details Circle Index Code 0200)

A program describing development of an extensive system of low-cost educational TV stations is available from Adler Electronics, Inc., New Rochelle, N. Y. The statement was presented by President Ben Adler to the Senate Committee on Interstate and Foreign Commerce in April, 1958.

(For Further Details Circle Index Code 0201)

The 1959 edition of a 76-page planning manual for educational science laboratories is available from Kewanee Mfg. Co., Adrian, Mich. Section 5-A includes an analysis of science activities, layouts for laboratories, and elevation drawings of equipment used.

(For Further Details Circle Index Code 0202)

An 88-page catalog describes the complete line of industrial power tools and accessories manufactured by Rockwell Mfg. Co., Delta Power Tool Div., Pittsburgh 8, Pa. Complete specifications and catalog listings are included in the two-color catalog.

(For Further Details Circle Index Code 0203)

Catalog 5-B, released by Metalab Equipment Co., Div. of Norbute Corp., Hicksville, L. I., N. Y., contains complete information on the firm's expanded line of metal laboratory equipment.

(For Further Details Circle Index Code 0204)

The Schieber line of folding tables and benches is illustrated in a new 4-page architect's file. Send for this catalog sheet from Schieber Sales Co., Detroit, Mich.

(For Further Details Circle Index Code 0205)

Geerpres floor-cleaning equipment is illustrated in a new 20-page catalog from Geerpres Wringer, Inc., Muskegon, Mich. The complete line is shown including gear mop wringer, caster-mounted buckets, and other mopping accessories. Send for catalog No. 958.

(For Further Details Circle Index Code 0206)

Cleaning and maintaining grease traps, plumbing lines, kitchen drains, septic tanks, cess pools, sewer lines, etc., is the function of Bionetic made by Reliance Chemicals Corp., Houston, Tex. A free, colorful folder describes the institutional uses of this product.

(For Further Details Circle Index Code 0207)

CORRESPONDING CODE INDEX NUMBERS TO BE ENCIRCLED CAN BE FOUND ON THE CARDS IN THE READER'S SERVICE SECTION

## FOR SALE:

22 Band Uniforms, black trimmed with Orange. 14 extra blouses. Complete with Sam Black Belts. Contact Charles A. Hill, Dept. of Music, Ohio Northern University, Ada, Ohio.



# READER'S SERVICE SECTION

## INDEX TO SCHOOL EQUIPMENT

The index and digest of advertisements below will help you obtain free information, catalogs, and product literature from the advertisements and companies listed in the new products section. Merely encircle the code number assigned to each firm in the request form below, clip the form and mail it to THE AMERICAN SCHOOL BOARD JOURNAL. Your request will receive prompt attention.

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	Cooling, heating & ventilating equipment		Junior science facilities. New 32 page catalog
1216	Hillyard Chemical Company..... 45	1231	Southern California Plastering Institute ..... 49
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December, 1958

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0179 0181 0183 0185 0187 0189 0191 0193 0195 0197 0199 0201 0203 0205

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Rest room vendors for

**Kotex**

feminine napkins



no school should be without



The vendor for Kotex feminine napkins is a compact wall cabinet 20" high, 7" wide and only 5" deep with choices of white enamel, satin or polished chrome finishes. Streamlined—easy to install.

KOTEX and WONDERSOFT are trademarks of KIMBERLY-CLARK CORPORATION

More than just a convenience, vendors for Kotex feminine napkins provide a needed and appreciated service for your students and teachers. Available without charge, these handy, coin-operated vending machines make Kotex readily available at all times.

When you offer Kotex, you provide the feminine napkin most women prefer. Only Kotex has Wondersoft—the gently spun covering that *won't rub*, *won't chafe* . . . and Kotex has the extra absorbency that's instant and complete.

Kotex feminine products sponsor a complete program on menstrual education for both elementary and high schools, without charge. For information fill in and mail the coupon below.

\*\*\*\*\* CLIP AND MAIL \*\*\*\*\*

**Kimberly-Clark Corporation,**

Department Number AJ-128 Neenah, Wisconsin

\_\_\_\_\_ Please send me further information on vending machine service for Kotex feminine napkins.

\_\_\_\_\_ Please send information on the Kotex Educational program.

NAME \_\_\_\_\_

ORGANIZATION \_\_\_\_\_ TITLE \_\_\_\_\_

STREET \_\_\_\_\_

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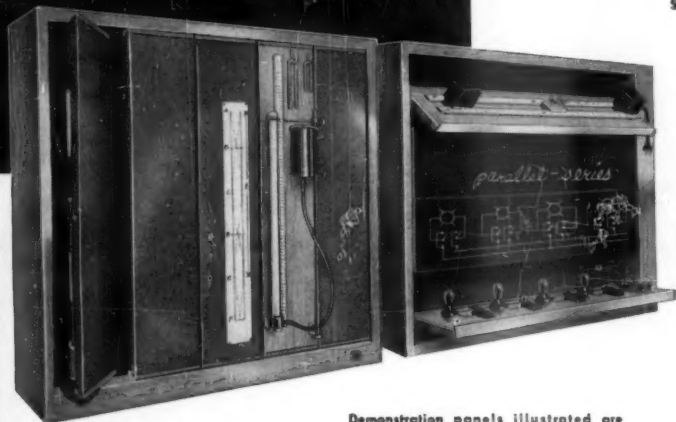
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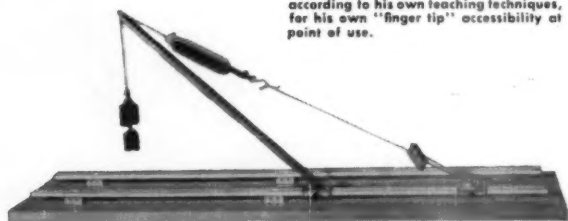
**Educationally Correct**

# Junior Science Facilities

Laboratory experiences for all students — demonstration facilities for every  
science study — apparatus stored at point of use.



Demonstration panels illustrated are typical suggestions. The instructor may mount his apparatus on these panels according to his own teaching techniques, for his own "finger tip" accessibility at point of use.



CRANE BOOM



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FOR SETTING UP AND USING A  
SHELDON JUNIOR SCIENCE ROOM

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